Chapter 6
The General Government, its Product and Financing[1]

- The budget deficit excluding credit rose in 2008 to exceed its ceiling, and the general government's deficit, which is measured in accordance with National Accounts definitions,[2] was 2.4 percent of GDP,[3] compared with 0.2 percent in 2007. The increase in the deficit this year was due to a steep fall in tax revenues.
- After the sharp drop in the public-sector debt/GDP ratio in 2007, its rate of decline slowed in 2008, and the debt reached 78 percent of GDP. This was the result primarily of the stability of the exchange rate in relation to its rise in 2007 and the marked expansion of the budget deficit. This ratio remained higher than that in the developed countries, but its contraction in recent years has significantly narrowed the gap.
- The tax/GDP ratio fell by 2.6 percentage points in 2008—about 1 percentage point of it due to tax cuts—to stand at 33.9 percent. Revenues were substantially lower than forecasts made at the beginning of the year, mainly because of the impact of developments in the capital market. Israel's tax/GDP ratio is currently lower than those of most of the developed countries, as is the tax rate on wages. The progressive nature of taxes on wages has declined and has begun to approach the rate common in the developed countries.
- The public expenditure/GDP ratio, which has declined consistently since 2002, continued to contract in 2008, to reach 43.3 percent—placing Israel at the midpoint of the distribution of developed countries, after being at the top of the distribution at the beginning of the decade.

[1] The general government comprises the central government, the National Insurance Institute, the local authorities, nonprofit institutions (the health funds, universities, religious seminaries, etc.), most of whose income is from the general government, and the National Institutions (the Jewish Agency, the Jewish National Fund, and the World Zionist Organization). Its activity is measured in accordance with National Accounts definitions, which differ from those used in the national budget. For a discussion of the differences between the National Accounts data and the budget, see Box 3.1 in the 2004 edition of this publication.

[2] The calculation in Israel does not include indexation differentials on the public-sector debt.

[3] The calculation in this chapter does not include the item 'Bank of Israel profit,' for several reasons: 1. This item fluctuates and reflects mainly unexpected changes in the inflation rate, the exchange rate, and global interest rates; 2. The Bank of Israel does not actually transfer to the government the 'profit' calculated by the Central Bureau of Statistics (CBS) (as is explained in the Financial Report attached to the Bank of Israel's Annual Report in 2001); 3. In most of the developed countries, including the EU, it is customary to record as government income only profit that is actually transferred by the central bank.

- The budget was fully utilized in 2008—the result of extensive under-utilization from the middle of the year and the fact that a large part of the 2009 budget expenditure was brought forward in December.
- Because of the global economic crisis, its influence on Israel, and expectations that it will persist in 2009, the government's objectives in the next few years are to ease the slowdown and prevent the ongoing damage which it could inflict on the economy, minimizing the impact on the weaker segments of the population, and creating the infrastructure for sustainable future growth. The credibility the government has acquired in recent years—reflected in the moderate rise in the yield on government bonds—enables it to allow the automatic stabilizers to work, as well as to even stimulate economic activity to some extent.
- If the crisis develops in accordance with current predictions, the debt/GDP ratio is expected to grow in the next two years. The extent and duration of this trend depends on the fiscal policy which the government adopts: a fiscal rule based on increasing expenditure in accordance with the current upper limit will enable the debt/GDP ratio to begin declining in 2011, and if the slowdown is more protracted than forecast, in 2012. This policy, together with its advantages in the financing sphere, will require decisions to be made about marked reductions in the expenditure path to which the government has committed itself in the next few years, making a very small increase in civilian expenditure possible.
- A policy of increasing expenditure in line with the long-term plans adopted by the government, without reducing other expenditure or increasing taxes, will obviate returning to the declining debt/GDP path in the next few years, and will even lead to its discontinuation, especially if the crisis deepens or lasts longer than expected. As a result, the burden of future debt-servicing payments and Israel's risk premium are liable to rise.

1. FISCAL INDICATORS AND MAIN DEVELOPMENTS

The sharp rise of the deficit to 2.4 percent of GDP in 2008 is due entirely to the decline in tax receipts, 40 percent of which stemmed from cuts in tax rates.

The general government's overall deficit rose to 2.4 percent of GDP, after declining to 0.2 percent of GDP in 2007, and to 0.7 percent in 2006 (Table 6.1). The increase in the deficit in 2008 was due solely to the fall in tax revenues (as the share of expenditure in GDP continued to contract in 2008). 40 percent of it stemmed from the decline in the statutory tax rate, while the rest was the result of the fall in the capital market in the wake of the global economic crisis and the marked decline in income from imported goods. The rise in the overall deficit expresses a sharp increase in the deficit of the general government and of nonprofit organizations, the continuation of the balanced budget of the local authorities, the surplus of the National Insurance Institute, and the deficit of the National Institutions (Statistical Appendix Table 6.A.9).

The budget deficit (excluding credit extended) rose as a percentage of GDP, after reaching zero in 2007, to stand at 2.1 percent—above the deficit ceiling of 1.6 percent of GDP (Figure 6.1) but below the deficits that prevailed at the beginning of the decade. This follows four years in which the actual budget deficit was below the level planned when the budget was approved. Its increase in 2008 is the result of lower than expected revenue, in contrast with previous years when the deficit was lower than expected because of higher than expected revenue and under-utilization of government expenditure.

The budget deficit rose to 2.1 percent of GDP, after being zero in 2007, and was above the deficit ceiling of 1.6 percent of GDP.

This is the sixth year in succession that the expenditure/GDP ratio has fallen, despite the relatively rapid rise of both civilian and defense public consumption as well as of transfer payments at similar rates to those of 2007. This was also made possible by the fall in debt-servicing payments, which contracted significantly in 2008, attesting to the importance of reducing the debt/GDP ratio.

For the sixth year in succession public expenditure declined as a share of GDP.

Tax revenues as a share of GDP fell by 2.6 percentage points to stand at 33.9 percent of GDP, due to the continued reduction of the statutory tax rate, sharp falls in tax revenues on imports, and the decline in the capital market. The moderation of economic activity during the year led to a decline in both direct and indirect tax revenues . Direct tax revenues fell because of the weakening of activity in the labor market, which caused income tax to contract, especially due to the decline in taxes on profits—the outcome of the global crisis, which caused both capital gains and corporation taxes to contract; the decline in indirect taxes reflected the substantial fall in the consumption of imported durables, which are heavily taxed, and include vehicles. The tax burden in Israel is currently very low in an historical perspective, and below that in most of the developed countries.

The share of tax revenues in GDP fell by 2.6 percentage points to 33.9 percent of GDP—low in historical terms and below the level in most developed countries.

The debt/GDP ratio continued to decline in 2008 for the sixth consecutive year this was because the GDP growth rate exceeded the deficit/GDP ratio, more than offsetting the increase in the deficit. However, the stability of the exchange rate (at the end of the year), after the local-currency appreciation of 2007, together with the steep rise in the budget deficit, moderated the rate at which the debt declined, so that at the end of the year it stood at 78 percent of GDP. The gross debt/GDP ratio reached its lowest level since it began rising in the 1960s.

Despite the rise in the deficit, the debt/GDP ratio continued to decline in 2008, although it was still high in comparison with the developed countries.

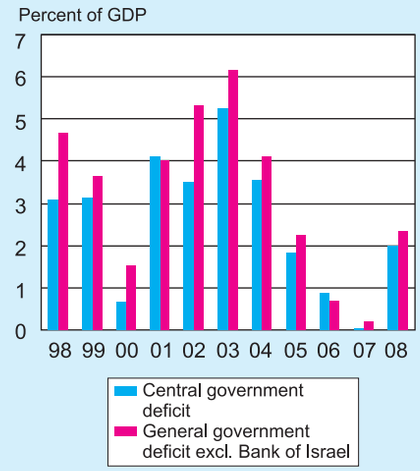
Despite the continued decline in the debt/GDP ratio relative to that of the developed countries,[4] Israel's debt is still high. Note that in the wake of the reactions of the governments of the developed countries to the global crisis, their debt/GDP ratios are expected to grow by 3 percent of GDP in 2012 from 2009, in contrast to forecasts of a 4 percent of GDP decline made before the crisis. The deficit expected in 2009—5 percent or more of GDP, above the actual deficit in the last five years—precludes the continued reduction of the debt/GDP ratio, as is the case in the developed countries. In order to attain the level of debt accepted in those countries the government will

The deficit is expected to be 5 percent or more of GDP in 2009, above the actual deficit in the last five years, which obviates the further reduction of the debt/GDP ratio. This is in line with the developed countries.

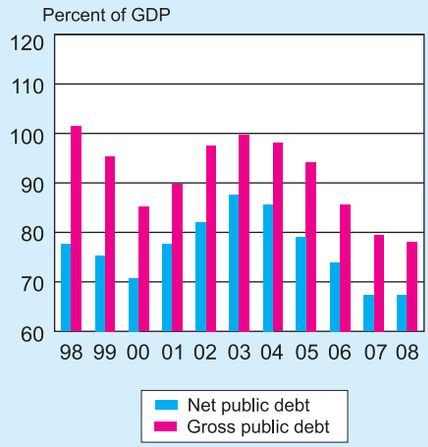
[4] The developed countries are the 20 veteran members of the OECD whose annual per capita GDP is above $ 15,000, and for whom there are data for the last fifteen years. The comparison with the EU countries relates to the fourteen countries which were members before 2003, with the exception of Luxembourg.

Figure 6.1[a]

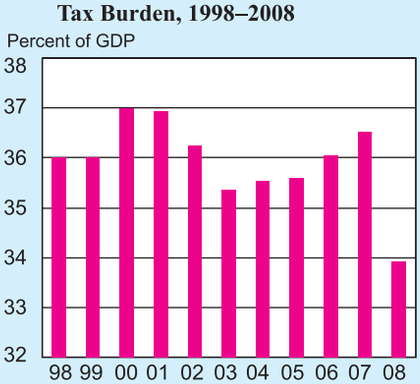
General Government and Central Government Deficits, 1998–2008



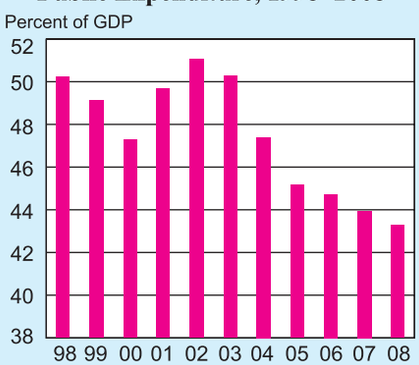
Public Debt, 1998–2008



Tax Burden, 1998–2008



Public Expenditure, 1998–2008



[a] In addition to tax revenues, the public sector has income of about 7 percent of GDP from grants from abroad, capital transfers from residents, depreciation and imputed pensions.

SOURCE: Based on OECD and Central Bureau of Statistics

In order to attain the debt levels accepted in the developed countries the government will be required, once Israel returns to its average growth rates, to continue restricting the rise in its expenditure and reduce debt rather than lower tax rates further.

be required—once Israel's average growth rates are reached once more—to continue restricting the rise in its expenditure and prefer the reduction of the debt to lowering tax rates beyond the planned level. This will enable sources to be diverted to the permanent and essential improvement of government services in the future, because the lower the debt burden and the interest on it, the smaller will be the threat to financial stability, enabling the government to be more flexible in its expenditure, particularly at times of crisis.

Table 6.1
The Main Components of General Government Receipts and Expenditure, 1996–2008

(percent of GDP)

	Average 1996-2000	2001	2002	2003	2004	2005	2006	2007	2008
Total receipts	**45.6**	**45.6**	**46.5**	**43.3**	**43.1**	**43.2**	**43.8**	**44.1**	**41.2**
Excl. Bank of Israel	**45.8**	**45.6**	**45.7**	**44.1**	**43.3**	**42.9**	**44.0**	**43.8**	**40.8**
From property	1.4	1.4	2.3	0.6	1.0	1.4	0.9	1.5	1.3
Of which Receipts of Bank of Israel	-0.2	0.0	0.7	-0.8	-0.2	0.2	-0.2	0.4	0.4
Total taxes	36.5	36.9	36.2	35.4	35.5	35.6	36.1	36.5	33.9
Indirect taxes on domestic production	13.1	12.1	13.0	13.1	13.0	13.0	12.5	12.4	12.3
Indirect taxes on civilian imports	4.4	3.9	3.9	3.7	4.2	4.2	4.0	4.6	4.2
Direct taxes, fees, and levies	13.6	15.1	13.5	12.6	12.5	12.6	14.0	13.9	11.7
National Insurance surplus	5.4	5.8	5.9	6.0	5.8	5.8	5.6	5.6	5.7
Grants	3.7	3.4	3.8	3.4	2.7	2.4	3.0	2.3	2.2
Other[a]	4.1	3.9	4.0	4.0	3.9	3.7	3.9	3.8	3.8
Total expenditure	**50.0**	**49.7**	**51.1**	**50.3**	**47.4**	**45.2**	**44.7**	**44.0**	**43.3**
Current expenditure	45.4	45.8	46.8	46.6	43.8	41.9	41.4	40.5	39.7
Domestic civilian consumption	18.9	19.1	19.5	19.4	18.7	18.1	17.7	17.9	18.0
Domestic defense consumption	6.5	6.2	6.8	6.7	6.1	5.7	5.9	5.7	5.8
Defense imports	1.8	1.8	2.2	1.8	1.5	1.7	1.7	1.5	1.3
Direct subsidies	0.9	0.9	0.7	0.9	0.7	0.7	1.1	0.8	0.8
Transfer payments on current account	11.4	12.4	12.5	12.1	11.1	10.7	10.5	10.2	10.2
Interest payments	5.8	5.4	5.0	5.8	5.7	5.1	4.6	4.6	3.7
Transfer payments on the capital account[b]	1.8	1.4	1.7	1.2	1.6	1.6	1.7	1.8	2.0
General government investments	2.8	2.4	2.6	2.5	2.0	1.8	1.6	1.7	1.6
Total general government deficit	**4.4**	**4.1**	**4.6**	**6.9**	**4.3**	**2.0**	**0.9**	**-0.2**	**2.0**
Total general government deficit excl. Bank of Israel	**4.2**	**4.0**	**5.3**	**6.1**	**4.1**	**2.2**	**0.7**	**0.2**	**2.4**
Total surplus excl. interest and receipts from property	**0.1**	**0.0**	**-1.9**	**-1.8**	**0.4**	**1.6**	**2.8**	**3.3**	**0.4**
Net public debt[c,d]	**76.6**	**77.7**	**82.0**	**87.6**	**85.5**	**78.9**	**73.9**	**67.2**	**63.1**
Gross public debt excl. Bank of Israel[d]	**96.5**	**89.9**	**97.6**	**99.8**	**98.1**	**94.1**	**85.6**	**79.4**	**78.0**

[a] Including transfer payments from the public on the current and capital accounts, imputed pension, depreciation, capital transfers from abroad, and transfers from abroad to National Institutions and nonprofit organizations.

[b] Including mortgage subsidy and transfers to nonprofit organizations and businesses on the capital account.

[c] At end-of-year prices.

[d] After deducting the local authorities' debt to the central government.

SOURCE: Based on Central Bureau of Statistics data.

2. PUBLIC EXPENDITURE, THE GOVERNMENT BUDGET, TAX REVENUES, THE DEFICIT AND THE DEBT

a. General government expenditure

Since 2002 the share of public expenditure in GDP has fallen by 7.8 percentage points.

Public expenditure as a share of GDP continued to decline in 2008 for the sixth year in succession. This ratio is low in an historical perspective, and is the lowest since defense expenditure increased in the late 1960s, reflecting both the fiscal restraint which characterized the beginning of the last cycle and the rapid economic growth. The share of public expenditure in GDP has contracted by 7.8 percent since 2002, with a real decline (adjusted for business-sector product prices) in expenditure *less* interest in 2003 and 2004, and an increase since 2005 (Table 6.2).

Half of the decline in the share of expenditure in GDP is due to the rapid economic growth of recent years, while half is the result of the reduction of cyclically-adjusted public expenditure.

Economic growth in the last six years exceeded expectations at the time the economic stabilization program was put into effect, in 2003: if the annual growth rate during this period had been only 3.5 percent—the growth rate of potential GDP—the share of public expenditure in GDP at the end of 2008 would have been 47.1 percent. This calculation shows that half of the decline in the public expenditure/GDP ratio is the result of the cycle, while the rest—4.0 percentage points—reflects a fall in the ratio adjusted for the cycle of public expenditure; this is equivalent to the total tax reductions in that period, which are assessed at 3.5 percent of GDP.

The decline in debt-servicing payments as a result of the continued reduction of the debt/GDP ratio has enabled other expenditure to rise more rapidly in 2008.

The total expenditure of the general government, adjusted for business-sector product prices, rose by 2.7 percent in 2008, less than in 2007 but excluding interest payments its growth rate was faster—4.7 percent, exceeding its 2007 rate. This attests to the importance of the decline in debt-servicing payments, the result of the continued fall in the debt/GDP ratio, which generally enables the faster expansion of other expenditure, as it did this year. The relatively steep rise in current expenditure in 2008 expresses the considerable quantitative increase in all the components of demand (Table 6.A.6), but mainly the continued expansion of public consumption, both civilian and defense, as well as the substantial increase in transfer payments—which grew far more quickly than both the population and GDP. The relatively rapid growth rate of civilian consumption in the last three years compensates to some extent for its erosion in the years of stabilization (2002–04), when there was a substantial per capita decline in these components. Note, however, that this rate is not sustainable, particularly if the growth rates converge to a lower long-term rate (Tables 6.2 and 6.9).

The share of defense expenditure in GDP dipped slightly from 2007 to reach 7.1 percent of GDP. Since the beginning of the decade, when it ranged between 8.0 and 8.3 percent of GDP, it has fallen by more than one percent of GDP, constituting an important element in the process of fiscal stabilization. In 2007 the government adopted the recommendations of the Defense Budget (Brodet) Commission, which involved focusing on a long-term strategy and reducing the likelihood of across-the-board cuts in other government ministries in accordance with the security situation at any given time. This was particularly pertinent in view of the reserves which the commission recommended should be allocated from the defense budget each year for financing

Table 6.2
Rates of Increase of Public Expenditure in Israel, 1996-2008

(percent, deflated by implicit price index of business-sector product)

	1996-99	2000-01	2002	2003-04	2005	2006	2007	2008
	(rate of increase, annual average)							
Total public expenditure	**2.7**	**5.7**	**2.1**	**-0.5**	**-0.1**	**4.1**	**3.7**	**2.7**
Of which Interest payments[a]	1.0	3.0	-8.0	9.6	-6.3	-5.1	5.6	-1.7
Total primary public expenditure	**3.0**	**6.1**	**3.3**	**-1.7**	**0.7**	**5.3**	**3.5**	**4.7**
Of which Current primary expenditure	4.0	6.6	2.7	-1.4	1.1	5.3	3.0	4.4
Current primary civilian expenditure	4.2	7.2	0.6	-0.5	0.9	4.6	3.8	4.9
Public consumption	3.6	5.5	4.9	-1.3	1.4	4.6	4.1	4.1
Public consumption excl. defense imports	3.0	5.7	3.5	-0.1	0.5	4.2	5.3	5.2
Civilian consumption	3.6	6.2	1.7	0.5	1.4	3.2	6.4	5.1
Per capita civilian consumption	1.1	3.6	-0.3	-1.3	-0.4	1.4	4.5	3.3
Wage expenditure	3.4	6.3	0.6	0.4	0.7	3.3	5.5	4.7
deflated by consumer price index	2.5	1.1	2.7	-0.7	1.6	0.6	4.3	3.0
Purchases	3.7	6.4	2.8	-0.6	1.3	2.9	7.6	6.6
Domestic defense consumption	1.1	4.9	8.6	-2.2	-1.6	7.5	3.0	6.0
Wage expenditure	0.1	4.9	3.4	-2.5	-1.5	6.1	-0.1	-0.1
deflated by consumer price index	-0.2	1.8	5.7	0.5	1.8	2.5	-0.9	1.4
Transfer payments on current account	6.0	9.2	-0.4	-2.4	0.4	3.1	2.4	5.2
Per capita transfer payments on current accoun	3.4	6.5	-2.4	-4.2	-1.3	1.3	0.6	3.4
General government investment	-3.0	4.3	7.8	-9.7	-7.5	-1.6	7.1	-1.0
Of which Transport infrastructure	-2.1	9.3	18.7	5.3	6.3	12.1	13.4	3.6
Transfer payments on capital account	-4.6	1.1	9.6	-4.8	-2.7	5.8	8.6	8.2

[a] The decline in interest payments in 2002 and their rise in 2003 reflect mainly the effect of changes in the rate of inflation on the CBS method of calculating the interest rate.

SOURCE: Based on Central Bureau of Statistics data.

unforeseen events, such as the war in the Gaza Strip at the end of 2008.[5] Note that according to the commission's predictions, the growth path of defense expenditure is subject to continued economic expansion (at an annual rate of 3–4 percent), which will enable the government to increase its overall expenditure ceiling to 2.5 percent as of 2010. If per capita growth is negative, as is expected to be the case in 2009, the planned expansion of the defense budget will have to be reviewed. Be that as it may, it

[5] In actuality, the budget for the war in the Gaza Strip, which was estimated at NIS 1.85 billion, did not come from the reserves for 2008, as these had been used for other purposes in the course of the year.

will also be more difficult to reduce the defense budget because of the war in the Gaza Strip at the end of the year.

Current transfer payments adjusted for business-sector product prices rose by 5.2 percent in real terms in 2008, a more rapid rate of increase than in 2007 and outstripping by far the growth rate of the population. In 2004 and 2005 these payments declined per capita in real terms. Total National Insurance benefits adjusted for the Consumer Price Index (CPI) grew by 2.4 percent in real terms in 2008 (Table 6.A.14), in line with their increase in 2007. The real rise in some of the benefits, among them maternity and disability benefits, reflects legislative changes. Child allowances fell slightly in real terms in 2008 and their share in GDP fell to about half what they were in 2000–02 because of legislative changes made in 2003. Expenditure on unemployment benefits and income-support payments also continued to decline, providing evidence of the continued contraction in the number of recipients of unemployment and income-support benefits during the year. The share of these payments in GDP is less than half what it was in 2000–02 due to the contraction in the share of persons eligible to receive them, but also as a result of the stricter criteria for receiving them applied since the beginning of the growth spurt and their real erosion vis-à-vis GDP, in line with the government's intention of increasing the employment rate.

b. The government budget and the deficit target

The government's overall deficit without credit extended rose sharply in 2008, after attaining zero in 2007, and amounted to NIS 15.2 billion, constituting 2.1 percent of GDP.

The government's overall deficit excluding credit extended rose sharply in 2008, after standing at zero in 2007, and amounted to NIS 15.2 billion, constituting 2.1 percent of GDP (Table 6.3). This was the result of the absence of any real change in expenditure,[6] alongside a sharp 6.1 percent real reduction in total revenue. The share of government expenditure in GDP was down by 0.7 percentage points from 2007, and since 2002 it has declined by 4.8 percentage points (Table 6.3). The legal ceiling for the real annual rise in government expenditure is 1.7 percent. The increase in prices in 2008, which exceeded the predicted rate by 1.8 percent,[7] together with the 1.8 percent budget under-utilization in 2007, on the one hand, and the deviations from the budget in 2007, on the other, expresses the absence of a real rise in expenditure alongside almost full implementation of the budget.

The government used the under-utilization of its expenditure, which had accumulated during the year, and elected to bring forward expenditure of NIS 4.4 billion from the 2009 budget and spend it in December. Had it not been for this expenditure the government would have met its deficit target of 1.6 percent of GDP. However, bringing forward expenditure has enabled it to allocate a similar amount in 2009 to various goals it has adopted, including the acceleration of economic activity and the stimulation of demand, or alternatively to cover additional costs beyond the budget

[6] Prices in this table are adjusted by the CPI, which in 2008 was 2.8 percentage points above the GDP deflator, by which expenditure is adjusted in Table 6.2.

[7] Since the budget is in nominal terms, a price increase which is above expectations reduces it in real terms.

Table 6.3
Central Government Deficit,[a] Revenue and Expenditure, 2000–2008

(percent of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Government domestic deficit ceiling[b]	2.8	0.5	4.1	2.3	3.4	2.8	2.0	1.9	1.0
Actual government domestic deficit	0.5	3.3	3.3	5.1	3.0	1.1	0.2	-0.9	1.4
Overall government deficit ceiling[c]	3.6	1.8	3.9[d]	3.0	0.4	3.4	3.0	2.9	1.6
Actual overall government deficit	0.6	4.1	3.5	5.3	3.6	1.8	0.9	0.0	2.1
Total revenue, net[e]	**34.4**	**32.7**	**33.8**	**31.8**	**31.9**	**32.6**	**32.9**	**33.1**	**30.4**
Taxes and imposts	29.1	28.8	28.1	27.1	27.1	27.3	27.7	28.5	25.9
Interest, profits, royalties, revenue from land sales	1.6	1.2	1.3	1.0	1.0	1.3	1.2	1.0	1.0
Realized Bank of Israel profits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loan from the National Insurance Institute (NII)	1.4	0.8	1.5	1.7	1.9	2.1	2.1	2.1	2.2
US government grants	2.3	1.9	2.8	2.0	1.9	1.9	1.9	1.5	1.4
Total expenditure, net[e]	**35.0**	**36.8**	**37.3**	**37.1**	**35.4**	**34.5**	**33.7**	**33.2**	**32.5**
Of which Interest, repayment of principal to NII, and credit subsidy	6.5	6.5	6.3	7.2	6.8	6.6	6.5	6.0	5.6
Defense expenditure, net	8.0	8.4	9.1	8.5	8.1	8.1	8.1	8.2	8.0
Total primary expenditure excl. defense	20.6	22.0	21.9	21.4	20.6	19.8	19.1	18.9	18.9

[a] Revenue and expenditure in 2006 do not include NIS 2.8 billion transferred to the Compensation Fund and paid as compensation to the public for damage due to the war in the north.
[b] The difference between the planned and the actual deficit includes 0.15 percent of GDP revenue which are recorded as domestic revenue when the budget is being prepared, but as foreign revenue in expenditure data.
[c] From 2001, the deficit ceiling specified by law.
[d] The target set in the middle of 2002. The target set when the budget was approved by the Knesset (parliament) was 3.0 percent of GDP.
[e] Excluding expenditure contingent on revenue, and revenue used to finance contingent expenditure.
SOURCE: Based on the National Budget Summary, and Central Bureau of Statistics data.

framework adopted in the budget proposal without departing from the expenditure target.

Most of the difference between the deficit ceiling (1.6 percent of GDP) and its actual level (2.1 percent of GDP) is explained by lower than predicted tax revenues —NIS 6.6 billion (see Section c below). Grants from the US were also less than expected in NIS terms because of local-currency appreciation. However, the surplus of the National Insurance Institute offset the deficit as it exceeded the budget forecast.[8] Another NIS 1.2 billion came from the income of the Israel Lands Authority, which was recorded as revenue in the budget, even though at the time the budget was approved it had been decided that this recording method would be changed.[9] The deviation of the deficit

Most of the difference between the deficit ceiling and its implementation is explained by tax revenues that were NIS 6.6 billion lower than expected.

[8] For an explanation of the way the activity of the National Insurance Institute is recorded in the national budget, see Box 3.3 in the 2002 edition of this publication.
[9] It would be better if this revenue was recorded as a financing item, is it reflects the sale of land and the transfer of ownership of property.

is the result of the departure from the domestic deficit, as the external deficit is as budgeted.

There was almost full implementation of the budget in 2008, but more than in previous years this expressed significant exceptional expenditure in December.

In cumulative annual terms, total expenditure was only slightly lower than the budget (Table 6.4). This year, however, to a greater extent than in previous years, this reflected the aforementioned exceptional expenditure in December (NIS 27.4 billion, 56 percent above average monthly expenditure in 2008), compared with exceptional under-utilization in August and September, and expenditure in line with the budget in January–August. Under-utilization during the year and exceptional expenditure at the end of it impair the government's operating efficiency, as hasty expenditure towards the end of the year, on the basis of the unutilized amounts that had accrued, leads to the inefficient use of sources and does not compensate for the loss of services in the course of the year.[10] Furthermore, the under-utilization in 2008 expresses the government's cyclical policy, which without a doubt did not serve to contribute to stimulate demand at that time.

Table 6.4
Components of Deviation from the Original 2008 Budget

(current prices)

	2007 Actual	2008 Original budget	2008 Actual	2008 Difference between budget and actual
		(NIS billion, net, excluding credit)		
Deficit (–)	**-0.1**	**-11.5**	**-15.2**	**-3.8**
Of which: Domestic	6.3	-6.4	-9.7	-3.3
External	-6.5	-5.1	-5.5	-0.4
Revenue	**223.2**	**222.7**	**217.5**	**-5.2**
Of which Domestic	211.3	210.9	206.5	-4.4
Taxes[a]	192.2	191.9	185.2	-6.6
Loan from National Insurance Institute	14.3	14.5	15.5	0.9
Other[b]	6.5	5.9	7.1	1.2
US government grants	10.3	10.4	9.7	-0.7
Expenditure[a]	**223.3**	**234.1**	**232.7**	**-1.4**
Of which: Domestic	207.0	218.8	216.9	-1.9
Abroad	18.3	16.9	16.4	-0.4
Defense[c]	55.1	49.7	57.3	7.6
Interest, repayment to National Insurance and credit subsidy	40.7	41.4	40.1	-1.3
Civilian ministries and transfer payments[c]	127.5	143.1	135.4	-7.7

[a] Including VAT on defense imports.
[b] Income from interest, land sales, royalties, dividends, and other income.
[c] NIS 3.7 billion included in the budget reserve in the budget book are shown here in the original budget column as part of the defense budget.
SOURCE: Based on data of the Accountant General regarding the performance of the 2007 budget.

[10] For a more detailed account and the separation between over-spending and under-utilization, see Box 6.1 in the 2007 edition of this publication.

Most of the deficit in 2008 was financed from domestic sources. The total amount required by the government, about NIS 9 billion, was reduced by a large surplus, totaling NIS 1.7 billion, of loans from previous years repaid to the government over new loans made in 2008, so that the actual amount of finance needed was NIS 7.4 billion. Nonetheless, the government decided to raise a net NIS 19 billion on the domestic market, and repaid NIS 6 billion of foreign debts. It thus accumulated a surplus of NIS 5.6 billion, which it can use in 2009.

The cyclically adjusted deficit

Since Israel's growth rates in recent decades have not been significantly higher than those of the developed countries, the ongoing reduction of Israel's debt/GDP ratio relative to theirs will not be feasible as long as its general government deficit is not below those of the developed countries. According to accepted international definitions, the general government deficit in Israel soared in 2008 to 4.1 percent of GDP (Table 6.6), while in the developed countries there was a budget surplus of 0.3 percent of GDP.[11] When the stage each country is at in the business cycle is taken into account in calculating the deficit, and adjustment is made for inflation (Table 6.7), the gap narrows to 2.2 percent, but is nonetheless large.

The handsome improvement since the beginning of the decade in the data regarding the general government deficit has reduced the gap between Israel and the developed countries. The reduction of the deficit relative to the smaller countries (with between 3 and 15 million inhabitants), which have had an average overall surplus in recent years, is less apparent, but is notable vis-à-vis developed countries with a large debt (Table 6.5). With regard to its debt/GDP ratio, Israel has significantly reduced the gap between it and the developed countries, mainly by virtue of its more rapid average annual economic expansion in that period. These findings are even more impressive, as at the same time Israel's tax burden has eased more rapidly than that of most of those countries. Finally, in the course of those years Israel has become more attractive and competitive in relation to the developed countries.

In terms of the deficit, the tax burden, and the debt/GDP ratio, in the last few years Israel has become more attractive and competitive in relation to the developed countries.

As a result of the global economic crisis many countries decided to implement an active counter-cyclical policy, and this is reflected in the sharp rise in the basic deficit expected in 2009 in some of them, and the even steeper increase in their debt/GDP ratios, as many of these government actions, such as extending credit, are recorded as enlarging their debt but not as a budget increment (see Box 2.1).

Since the size of the general government deficit is affected directly by the development of GDP, primarily via tax revenues , it is customary to also examine the development of the cyclically-adjusted deficit, the calculation of which is based on the

[11] To make the transition from Israel's definition of the general government deficit to the international one, it is necessary to add the indexation differentials on the NIS debt of the general government. Given the inflation rate of 3.8 percent in 2008, the increase is about 1.4 percent of GDP.

assumption that Israel's output gap has been closed.[12] In Israel it is also necessary to incorporate the inflation rate into the calculation, because of the unique way interest payments are recorded in the National Accounts and the budget, as subtracting the rate at which prices rise from the nominal interest rate leads to fluctuations in the interest rate calculated when there is a change in the rate at which prices rise.[13]

Table 6.5
The Overall Deficit, and the General Government Debt Burden in Israel and OECD Countries, 2000–08

	General government deficit (-)			Total general government debt (gross)			Tax burden		
	Average			Average			Average		
	2000-01	2007–08	Change	2000-01	2007–08	Change	2000-01	2007–08[e]	Change
	(% of GDP)								
Israel[a]	**2.8**	**1.2**	**-1.5**	**87.5**	**78.8**	**-8.7**	**37.0**	**35.3**	**-1.7**
US	-0.6	4.1	4.7	55.2	68.1	12.9	29.4	28.3	-1.1
OECD average[b]	-0.2	-0.6	-0.4	60.8	57.2	-3.6	37.3	37.1	-0.3
Average of advanced economies[b]	-0.7	-0.7	0.1	67.9	63.2	-4.7	38.7	38.1	-0.6
EU average[b]	0.7	0.6	0.0	64.3	57.0	-7.4	39.7	38.8	-0.9
Average of small countries[b,c]	-0.9	-1.9	-1.0	57.4	47.3	-10.2	39.5	38.7	-0.8
Average of countries with large debt[b,d]	1.3	0.8	-0.5	87.3	80.6	-6.8	39.6	38.7	-0.9

[a] Deficit data for Israel do not include the Bank of Israel or indexation differentials on the public debt.

[b] Arithmetic mean. Does not include countries for whom data for the years 2000–01 are missing.

[c] Countries with a population of less than 15 million in 2004.

[d] The average of countries whose debt in 2000 was larger than the OECD average.

e Except for Israel. tax burden for 2007 only.

SOURCE: Based on OECD Economic Outlook, 84, November 2008, and CBS data.

According to the steep increase in the cyclically adjusted deficit in 2008, government activity served to expand demand.

According to the calculation, the cyclically-adjusted deficit of the general government soared in 2008, due mainly to the effect of the reduction of the statutory tax rate (Table 6.7). The general government's cyclically-adjusted domestic deficit rose even more, by 2.2 percent of GDP. According to this index, which is a proxy for the direct effect of general government activities on demand in 2008, this activity contributed to the expansion of demand, attesting to a relatively aggressive counter-cyclical policy. This policy is the result of the pro-cyclical activity which was adopted in 2003 (the tax-reduction program, which was accelerated in 2005 and 2007), and does not reflect a government decision to prevent the exacerbation of the slowdown.

[12] Potential GDP as calculated here is based on the average rate of increase in per capita GDP since 1973: 1.7 percent a year. By this reckoning, GDP increased in 2007 by 0.5 percent more than potential GDP, lowering the cumulative deviation of GDP from its potential level to 0.8 percent. This assumes that actual GDP was equal to potential GDP in 1997. The calculation of the cyclically-adjusted deficit assumes that tax revenues increase in step with GDP and that total expenditure and non-tax revenues are not sensitive to changes in GDP. For a detailed discussion of the calculation, see Section 2 of Chapter 5 in the 1999 edition of this publication.

[13] According to the Central Bureau of Statistics' method of calculating the general-government interest expenditure, the actual rate of price increases is subtracted from the interest rate paid on the unindexed local-currency debt. If prices decline the rate of decline is not added to the interest rate. The calculation of the cyclically-adjusted deficit assumes a standard inflation rate of 2.0 percent.

Note, too, that the increase in the deficit might even undermine the public's sense of economic security and the government's fiscal credibility, particularly with regard to the permanence of the tax cuts (the Ricardian Effect). Increasing the deficit signals an expected rise in the tax burden, which also reduces demand for investment and consumption in the present. It is not clear which of the two effects predominated: if the expansion of public demand exceeds the decline in the demand for investment, consumption, and exports, GDP will rise, and vice versa. It seems likely that the effect of the increase in the deficit on growth in the short term depends to a great extent on the composition, depth, and permanence of this growth. Various studies undertaken worldwide have indeed found that in the last few decades an increase in government expenditure or tax cuts had little effect on GDP in the short run, and its direction is not clear-cut. For further elucidation, see Box 6.1.

The deficit rose more quickly in 2008 than planned, contributing to the reduction of the overall saving rate in Israel; this was reflected in the contraction of the current-account surplus of the balance of payments and real local-currency appreciation. It was not expressed in an increase in private saving, however, apparently because of the effect of the slowdown and the unexpected reduction in public saving.

Note that these deficit calculations are very sensitive to the estimation of potential GDP and assumptions regarding the response of tax revenues and public expenditure to a rise in GDP. On the one hand, the response of tax revenues to a rise in GDP is usually stronger during emergence from a slowdown than it is at a later stage.[14] On

Table 6.6
Principal Fiscal Aggregates by the Accepted International Definitions: Israel, the OECD and the EU, 2000-08

	2000	2001	2002	2003	2004	2005	2006	2007	2008
General government deficit (-)									
Israel[a]	1.6	4.7	8.1	5.7	4.7	3.4	1.2	1.4	4.1
Israel, local National Accounts definitions	1.5	4.0	5.3	6.1	4.1	2.2	0.7	0.2	2.4
OECD average[b]	-1.4	-0.1	0.9	1.4	1.0	0.2	-1.0	-1.0	-0.3
EU average[b]	-0.9	0.5	1.5	2.0	1.9	1.2	0.1	-0.1	0.9
General government expenditure									
Israel[a]	47.4	50.5	54.5	49.6	48.1	46.6	45.2	45.4	45.2
OECD average[b]	43.8	44.6	44.7	45.2	44.9	44.5	43.8	43.6	44.1
EU average[b]	46.0	47.0	46.9	47.5	47.5	47.1	46.3	46.0	46.4

[a] The data for Israel were brought into line with the accepted international definition: indexation differentials (accrual basis) on the CPI-indexed local currency debt were added to the general government's deficit and expenditure as defined in the National Accounts. Interest payments on the unindexed local currency debt were included without offsetting the inflation element, unlike in the National Accounts. In the calculation of the deficit, indexation differentials on the public's debt to the government were deducted.

[b] Arithmetic mean of the countries in the group that appear in Appendix Table 6.A.21 Excluding Norway, which currently has a large budget surplus that reflects high oil prices, on average the advanced economies had deficits averaging 0.7 percent of GDP in 2008.

SOURCE: Based on OECD Economic Outlook, 84, November 2008, and CBS data.

[14] A. Brender and G. Navon found that a one percentage point acceleration in the growth rate increases tax revenues by 0.3 of a percentage point: Falk Institute, collected articles (2007) (Hebrew).

the other, the calculation assumes that public expenditure will not change if the gap between actual and potential GDP closes, an assumption which is inconsistent with Israel's past experience. It has been found that for every percent of increase in business-sector product there is a rise of just less than 0.5 percent in public expenditure.[15] This correlation reflects the rise in wages in the general government sector during an economic boom, the indexation of some National Insurance benefits to the average wage, the increase in demand for public goods when the standard of living rises, and the tendency of political leaders to yield to pressures exerted on them and increase expenditure when tax revenues rise.

Table 6.7
The Cyclically Adjusted Deficit of the General Government, 2000–08[a]

(percent of potential output)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Overall deficit	2.67	3.36	3.05	3.09	1.61	0.58	-0.26	-0.22	1.7
Domestic deficit	3.14	3.69	3.30	3.44	1.56	0.27	0.01	-0.31	1.9
Overall deficit by international definitions[b]	3.60	4.26	4.14	4.25	2.50	1.61	0.94	0.50	2.8
Average cyclically adjusted deficit[c] of the advanced economies	0.42	1.15	1.66	1.68	1.41	0.88	0.02	0.13	0.6

[a] Interest payments were calculated assuming that the rate of inflation during the year was 2 percent, and not according to the actual inflation rate.
[b] The overall deficit was brought into line with the accepted international definitions by adding indexation differentials to the CPI-indexed and unindexed local-currency debt, assuming inflation of 2 percent.
[c] Arithmetic mean of all the countries in the group appearing in Appendix Table 6.A.21.
SOURCE: Based on OECD Economic Outlook, 84, November 2008, and CBS data.

Box 6.1
The desired fiscal policy during the current crisis

As the economic crisis intensified and its effect on Israel became clear, there were increasing calls from economists and politicians for a discretionary rise in the fiscal deficit in order to combat the slowdown. This would involve increasing expenditure and/or reducing the statutory tax rate—the Keynesian approach. Many others claimed, however, that the expansion of the deficit would serve to increase the private saving rate, thereby offsetting growth (the Ricardian effect). In this box we give a brief summary of the salient research findings in Israel and elsewhere in this field in an attempt to guide the implementation of the policy recommendations.

[15] See J. Zeira and M. Strawczynski, "The Cyclicality of Fiscal Policy in Israel," Bank of Israel Review, no. 80 (Hebrew).

The findings show that counter-cyclical fiscal policy is expected to slightly moderate the decline in demand, primarily in the developed countries. The expansion of expenditure can accelerate inflation, and in order for the reduction of taxes to be effective it must be credible. The conclusion to be drawn from weighting the findings and applying them to Israel, especially in view of the expected deceleration of the growth rate in 2009, is that the government should enable the automatic stabilizers to function as well as stimulating economic activity to some extent, while adopting a cautious budget policy. If the slowdown persists and even worsens, and the deficit expands to a higher level than expected, the postponement of the tax cuts planned for 2010 should be considered.

The mechanism of the automatic stabilizers is built into fiscal policy; a decline in economic activity reduces tax revenues and increases budget expenditure, so that the budget deficit expands. As a result, the government contributes to moderating the decline in aggregate demand during a slowdown even without changing existing policy. The main question in determining the extent of the fiscal policy aggregates, in contrast with the subject of their composition, is whether to regard the operation of the automatic stabilizers as sufficient, to try and offset them (pro-cyclical activity), or to extend fiscal intervention beyond them (counter-cyclical activity).

An international comparison[1] shows that the policy of the developed countries was counter-cyclical, while in emerging economies it was cyclical. Countries with a small government and relatively weak effect of the automatic stabilizers did not compensate for this with a more aggressive counter-cyclical policy than that adopted by countries with relatively large government expenditure. Finally, it transpires that over time the automatic stabilizers constitute a more dominant counter-cyclical mechanism than deliberate government intervention.

The opponents of counter-cyclical expansion claim that its implementation is slow (in contrast to monetary expansion), that it is subject to the effect of pressure groups, that individuals also take future income into account, and that in most cases expenditure does not decline after the economy has emerged from a slump. The expansion of the deficit can undermine stability, the public's sense of economic security, and the government's fiscal credibility. Worse still, it can serve to increase the expected permanent tax burden (the Ricardian effect), a change which also reduces current demand for investment and consumption.[2] The proponents of counter-cyclical expansion maintain that given the inelasticity of prices and wages, the expansion of government consumption or temporary

[1] World Economic Outlook, October 2008.

[2] See, for example, A. Sutherland (1997), "Fiscal Crises and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?" Journal of Public Economics, 65.

tax changes will stimulate demand,[3] especially if this expansion is credible and transparent. The public should be aware of its extent and duration, and must understand how it is financed.

It is not clear which of the two effects predominates. If the increase in public demand exceeds the decline in the demand for investment and consumption GDP will rise, and vice versa. It is possible to assess that the effect of the expansion of the deficit on growth in the short term will be dependent to a great extent on the composition, depth, and permanence of the increase. Research around the world has also shown that the decline in price rigidity, the increased effect of monetary policy, globalization, and the openness of economies have all served over time to reduce the effect of fiscal policy on domestic economic activity.

The empirical results have not settled the theoretical debate.[4] The estimation of the fiscal coefficient of economic activity shows that there is a wide range of results, ranging from positive to not significant and even negative. Typical results of the estimation of the multiplier range from –0.5 to 1. The results also show that fiscal expansion is expected to slightly increase economic activity in developed countries but not in emerging economies, where the negative effect of credit and national debt problems apparently exceed the positive influence of the expansion of demand. The effect of the credit problem may be intensified if expansionary fiscal policy is accompanied by tight monetary policy, so that the overall impact of fiscal expansion may also be negative.

There are several reasons for the inconsistency of the results, even when they refer to the same countries. First, when estimating the equations it is difficult to take into account a large number of factors which might be relevant. Second, in methodological terms it is difficult to distinguish between a deliberate change in government policy and one due to the automatic stabilizers. Furthermore, there are various ways of implementing policy—via taxes, transfers, and/or

[3] Lavie and Strawczynski show that reducing the deficit by cutting public consumption leads to a decline in demand in the short run even after offsetting its expansionary effect on private consumption (which declined after the Economic Stabilization Program). See Y. Lavie and M. Strawczynski (2003), "Does Fiscal Expansion Increase Aggregate Demand and Economic Acitvity in Israel? An Empirical Examination for 1960–2000," Economic Quarterly, 50, December (Hebrew).

[4] In an article which examines the expansionary effect of public expenditure and tax cuts on GDP, Perotti finds that even in established countries, where this effect is expected to be relatively great, it is small and sometimes negative. Studies which examine a wider range of countries do not provide unequivocal answers to the question of how fiscal policy affects GDP in the short term in particular, and sustainable growth in general. R. Perotti (2005), Estimating the Effects of Fiscal Policy in OECD Countries, CEPR Discussion Paper 4842, January; Sala-i-Martin (2002), 15 Years of New Growth Economics: What Have We Learned? Discussion Paper no. 0102-47. Department of Economics, Columbia University, April, p.10.
For a general survey of results in the literature see:
M.G. Briotti (2005), *Economic Reaction to Public Finance Consolidation: A Survey of the Literature*, ECB Occasional Paper no. 38.

government consumption—and each has different characteristics and effects. It is sometimes difficult to identify the point at which policy is implemented, for the purposes of the examination, as this may be the day on which it was initiated or the day the legislation was introduced. The calculation of the fiscal variable is not objective either and is subject to the investigators' subjective assumptions. Finally, the element of simultaneity is also at work, where the two variables influence one another. The last problem is the thorniest, as econometric methods have not resolved all the issues and each method has clear advantages and disadvantages.

A document published by the IMF[5] provides a relatively extensive review of the latest empirical results on the subject and reaches a similar conclusion. The same document also contains an independent examination of the effect of discretionary fiscal policy on GDP using panel data for the developed and developing countries. Here, too, the results are not unequivocal, and the direction of the effect of counter-cyclical fiscal policy depends on the point at which the response is measured, whether the country is developed or developing, the policy mix—whether the government reduces taxes or increases expenditure—the complementary monetary policy, the extent of the public-sector debt, and the interaction between the variables. Thus, for example, tax cuts and the expansion of expenditure are more effective in developed countries or those with a low debt/GDP ratio.

Israel in an international perspective

Adapting the situation of Israel—which is a developing country with a debt/GDP ratio higher than 75 percent—to the findings indicates that counter-cyclical policy, particularly the expansion of expenditure, will not increase demand, even in the short term. The reason for this, according to the study, is the negative result of an increase in the debt, which leads to a rise in the risk premium and interest. According to the study, this effect more than offsets the positive influence of an increase in demand due directly to the rise in the cyclically-adjusted deficit.[6]

Note, however, that Israel—in view of the declining debt path of the last six years, together with the growing credibility of economic policy and adherence to the deficit and expenditure targets—is not like other developing countries with similar fiscal characteristics, including a high debt/GDP ratio.[7] Consequently, Israel's regime of targets, and especially its rigorous application in recent years,

[5] World Economic Outlook, October 2008.

[6] For an analysis of the effect of the budget deficit and the deficit targets on the interest rates paid on the public debt, see H. Ber, A. Brender and S. Ribon (2003), "Does Fiscal Policy Affect Bond Yields? Evidence from Israel of the 1990s," Economic Quarterly, 50, December (Hebrew).

[7] Table 6.5 shows that the debt/GDP ratio, and even more so the deficit, have declined faster in Israel in the last few years than in most of the developed countries, despite the more notable easing of the tax burden. Nevertheless, no statistical relation was found between these factors and the expected rise in the deficit in these countries.

gives policymakers slightly more flexibility than is indicated by the findings from studies elsewhere in the world. In particular, a slight increase in the deficit, which is perceived by the public as purely temporary and involves a firm commitment to continue reducing the debt/GDP ratio in subsequent years, is not expected to be accompanied by a rise in the risk premium. Moreover, since the expansionary monetary policy adopted during 2008 has practically exhausted its ability to stimulate demand, the importance of fiscal policy is all the greater.

The figure below describes the statistical relation between the expected increase in the deficit in the next few years[8] and a country's gross debt ratio in 2007. The comparison focused solely on the OECD countries, excluding Iceland (because of the severity of the crisis there), Japan (because of the exceptional extent of its debt), and Norway (because of its exceptional budget surplus). The deficit is not cyclically adjusted and is the current deficit of the general government in each country that is expected in 2009.

The figure shows the inverse relation between a country's debt/GDP ratio and the size of its expected deficit in the next few years (at a significance level of less than 5 percent). This finding is consistent with the theory that the lower the debt/GDP ratio, the more effective an increase in the deficit. The figure also indicates that Israel is above the regression line, meaning that the expected rise in its deficit in the coming years is greater than would have been expected according to its debt/GDP ratio. Without referring to any of the budgetary and non-budgetary plans currently on the table, this finding emphasizes the fact that if expansionary measures are introduced, the scope for increasing expenditure is limited, and it is necessary to commit in a credible way to returning to a declining debt/GDP path once the slump comes to an end.

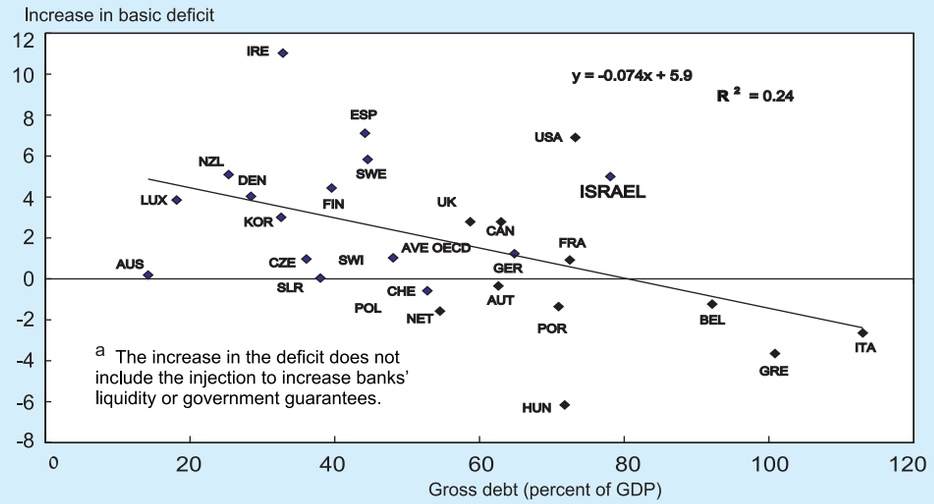
In addition, the examination of the main considerations reveals that the most appropriate measure of intervention at present is the expansion of expenditure rather than the reduction of taxes.[9]

In conclusion, in view of the expected decline in demand and the significant reduction of the debt/GDP ratio in recent years, the government can and must

[8] Note that most of the aggressive fiscal interventions by governments worldwide, among them capital injections, the nationalization of banks, purchase of corporate bonds, expansion of liquidity by central banks, and the provision of a financial safety net represent expenditure which is not recorded as such in the budget, and hence do not affect the annual deficit, focusing primarily on the public debt path. Note, too, that these actions largely characterized the developed countries, where the simple average of intervention reached 39 percent of GDP, although the variance between them as regards the intervention is enormous. Among the emerging economies the average intervention was 3.5 percent of GDP. Naturally, because of the nature of the intervention these prices are merely an estimate. Source: WEO, January.

[9] For further elucidation of the considerations, see Bank of Israel Position Paper (2009), "Israel and the Global Crisis: Government Policy Recommendations," p. 19, and for a more detailed analysis of the budget policy framework and its fiscal implications for the implementation of the program, see pp. 16–28.

Figure 1
The Expected Increase in the General Government Deficit[a] (percent of GDP) in 2009 Compared with 2007, and Gross Debt, Israel and the OECD



act specifically to stimulate economic activity in the short term, even beyond the action of the automatic stabilizers, primarily by expanding demand through a temporary increase in expenditure. Because of Israel's relatively large debt, the budget framework for these programs is limited. The objective of the measures is to moderate the slowdown, minimize the cyclical impact on the weaker segments of the population, create the infrastructure of sustainable growth, and bolster the government's credibility. Accordingly, the measures must uphold several principles, foremost among them flexibility, impermanence, adaptability, continuity (modularity), transparency, immediate applicability, and a rapid and extensive effect on domestic activity (for a more detailed account of the specific measures required, see Section 9 of Chapter 1).

Expansionary fiscal policy, including the expansion of expenditure, can be effective, but in order for this to be the case it is necessary to convince individuals that there is no potential danger of an ongoing departure from the downward path of the debt/GDP ratio, and to ensure that this is done by adopting a medium-term fiscal rule which includes explicit measures that will serve to reduce the debt/GDP ratio by 2011. For example, if the slowdown persists and an exceptional deficit path develops (both conditions simultaneously) in the budget definitions, it may be advisable to adopt measures that will reduce the deficit path, e.g., postponing the planned tax cuts to 2010.

c. Tax revenues

The easing of the tax burden derives from two main sources which are of similar weight: the decline in revenues from capital gains tax and corporation tax and the continued reduction of the statutory tax rates.

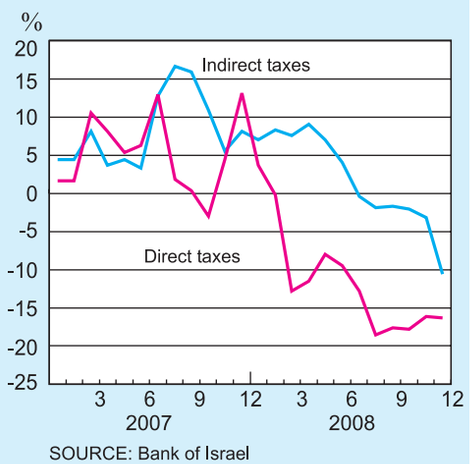
The ratio of tax revenues to GDP—the tax burden—dipped by 2.6 percentage points in 2008 (Figure 6.6 and Statistical Appendix Table 6.A.11). This result is surprisingly strong, even though it was to be expected that the rapid response of the recovery of economic activity to tax revenues , which characterized the boom stage of the business cycle, would moderate as growth stabilized. In the last few years the steep decline in the statutory tax rate on wages and the introduction of the capital gains tax have increased the sensitivity of tax revenues to the business cycle and increased the activity of the automatic stabilizers, because whereas tax revenues on wages have shifted slightly in percentage terms, tax revenues from the capital market are far more volatile, as is indicated by the fact that in 2008 they fell by some fifty percent.

Two factors whose weight was basically the same constituted the main cause of the easing of the tax burden: the global financial crisis, which was expressed in the sharp fall—of approximately one percent of GDP—in tax revenues on capital gains and on the government's revenues from corporation tax, and the continued reduction of the statutory tax rate, whose effect on revenues in 2008 was estimated in 2007 to be one percent of GDP (NIS 6.8 billion). Note that the effect of the tax cuts was calculated on the basis of the assumption that they would not influence economic growth, even though they could have contributed to it and offset part of the loss of revenue,[16] and the assumption that actual direct tax revenues in 2008 would be 11 percent higher than they actually were. The latter factor is expressed in the fact that the effect of actual legislation in 2008 was about NIS 6 billion.

There was a surprisingly sharp real 7.2 percent decline in tax receipts in 2008.

Altogether, tax revenues were down by a real rate of 7.2 percent from 2007 (NIS 14 billion in real terms, half of it, as stated, due to legislative changes) and amounted to NIS 185 billion. The real fall in direct tax revenues was 16 percent, with the decline in revenues throughout the year and their stabilization in the last third of 2008 at a rate that was one-sixth below that of 2007 being most prominent (Figure 6.2). Indirect tax

Figure 6.2
The Real Change in Tax Revenues, 2007-08
(3-month year-on-year changes)



SOURCE: Bank of Israel

[16] For a discussion of the findings concerning the effect of the tax burden on GDP in Israel, see: Y. Lavie and M. Strawczynski (2001), "The Effect of Policy Variables and the Rise in Business-Sector Product and its Components—Factor Inputs and Productivity—in Israel, 1960–1995," Bank of Israel Economic Review, 73 (Hebrew); for a review of findings in the world, see, M. Rider (2006), The Effect of Personal Income Tax Rates on Individual and Business Decisions: A Review of the Evidence, Andrew Young School, working paper 06-15.

revenues remained stable on the whole relative to the previous year—the result of their increase in the first half of the year and sharp decline in the second, a decline that reflects the slowdown in economic activity during that period.

The principal component of the decline in indirect tax revenues in 2008 was the tax on civilian imports, which fell by 4.5 percent in real terms to stand at 4.3 percent of GDP (Table 6.A.16). Also prominent were the sharp falls in revenues from purchase tax and employers tax, although their share in total indirect tax revenues is far smaller. Direct tax revenues dipped in real terms, primarily as a share of GDP (Tables 6.A.12, 13, 17)—due to the steep drop in the share of corporation tax in GDP for the second year in succession,[17] after a marked rise during the economic boom, and a decline in direct taxes on wages because of the real erosion of the latter in 2008. The fall in capital gains tax revenues, which were down by 50 percent (after rising sharply in 2007), was surprising in its intensity. From Statistical Appendix Table 6.A.12 it can be seen that the decline in the share of direct taxes in GDP exceeded the decline in the rate of GDP growth—reflecting, in addition to the statutory decline, the non-linear response of tax revenues to macroeconomic developments, also because of the progressive nature of the tax system.

The tax model developed by the Bank of Israel's Research Department shows that the decline in revenues in 2008—adjusted for the effect of the legislative changes—is consistent with the explanation derived from the model's variables, according to which a 4 percent decline in revenues is explained by the following factors: 1. Foremost among the explanatory variables are the financial variables included in the model, which explain 3.9 percent of the decline in revenues in 2008; 2. The rise in GDP—including the change in the share of the GDP deflator in the CPI and the GDP growth rate—contributed 2.5 percent to the expansion of revenues; 3. The extent of imports of consumer goods contributed 1.2 percent of the decline;[18] 4. The reduction of the real wage, which contributed 0.5 percent of the decline; 5. The slow growth rate of apartment sales contributed 0.2 percent of the reduction in revenues. Note, too, that revenues in 2007 were higher than had been predicted. All in all, the model explains 72 percent of the decline in total revenues. An analysis of the composition of the decline shows that most of the significant variables are cyclical and are in step with the contraction of the growth rate, although the steep drop in revenues from the capital market went beyond the cyclical effect. The import component, which in the past has deviated from its long-term association with GDP,[19] corrected itself this year and, as expected, this was expressed in a relatively steep fall in tax revenues.

An analysis of the composition of the decline in tax revenues shows that most of the significant variables are cyclical, although the sharp fall in receipts from the capital market exceeded the cyclical effect.

[17] Total corporate tax revenues fell by 20 percent in real terms—NIS 6 billion; NIS 3 billion because of one-off revenues in 2007, NIS 2 billion because of the contraction of economic activity, and the remaining NIS 1 billion because of legislative changes.

[18] Wages and imports of consumer goods are included in the model as deviations from the long-term relation estimated between these variables and GDP.

[19] For further elucidation of the rise in domestic demand, which led to the rapid expansion of imports, see Chapters 2 and 7.

The government's tax revenues in 2008 were NIS 6.6 billion below the level forecast in the budget. Most of the gap which emerged, even though actual GDP growth was more or less in line with that forecast, stemmed from steep falls in tax revenues from the capital market. This finding demonstrates once again the inherent uncertainty of tax forecasts, due mainly to the difficulty in predicting the macroeconomic variables affecting revenues, including GDP growth rates; this is the case even when the economic relationships between these variables and revenues are known.[20]

The cumulative and sharp—20 percent—reduction of the weighted statutory tax rate in the last five years contributed to economic activity. However, given the large deficit, which exceeded the target, and the light tax burden, further reductions beyond the existing path should be considered very carefully.

The reduction of tax rates in 2008, together with those of the preceding two years, were part of a long-term plan set out by the government in the past. The recent tax cuts were not restricted to the period reviewed but also referred to additional reductions in the income tax on wages (including National Insurance payments) and profits, to be introduced gradually by 2010, so that by then net tax reductions would be down by NIS 25 billion from 2003. The statutory tax cuts in 2008 included the reduction of the corporation tax and of the income tax on individuals. As a result, the weighted statutory tax index dropped by 1.0 percentage points in 2008, and by a cumulative 20 percent over the last five years, by 4.6 percentage points to 18.4 percent.[21] This is without a doubt a marked decline, which contributed to Israel's economic growth in that period. However, given the large deficit, which deviated from the target, and the low tax burden, further reductions beyond the current path should be considered very carefully.

As a result of the tax cuts which have already been implemented the proportion of wages paid as taxes in Israel is lower than that in most of the developed countries at almost every wage level.

A seminal component of the downward path of tax rates in recent years has been the reduction of tax rates on wages. The tax reform, which was put into effect in 2003, significantly reduced tax rates in most tax brackets, and the reform introduced at the end of 2005 extended this development to both the current period and up to 2010. As a result of the tax cuts which have been made to date the tax rate on wages in Israel is lower than that in most of the developed countries at almost every income level (Table 6.A.13), and given the forecast of economic developments in Israel in the coming year this gap is expected to continue to widen (see Box 6.2).

Box 6.2
Taxes on wages in Israel: an international perspective

A crucial element of fiscal policy since 2003, whose intensity peaked in 2008, has been the reduction of the tax rate on wages. The tax reform which was put into practice in 2003 has significantly reduced tax rates in most tax brackets. The reform introduced at the end of 2005 expanded this development, and in 2008 there was a further tax cut beyond the previous reform path. Altogether,

[20] Brender and Navon (2007), see note 14.

[21] For an explanation of the calculation of the index, see K. Flug and M. Strawczynski (2007), "Ongoing Growth and Macroeconomic Policy in Israel," Bank of Israel Economic Review, 80 (Hebrew).

taxes on wages[1] were slashed by some NIS 5 billion (net) in 2008 alone. At the beginning of 2009 the tax rates on wages were cut even further, in accordance with the existing trajectory, and in 2010 another reduction is expected, bringing the current series of reductions to an end. In the wake of the tax cuts that have already been made, tax rates on wages in Israel in 2009 are lower than in the developed countries at almost every wage level (Table 2).[2] Two years ago Israel was still characterized by tax rates that were higher than both the average and the median in the developed countries for wages above NIS 15,000—which accounts for 20 percent of employees. Now, however, its tax rates are higher than the average only for persons earning above NIS 25,000 a month, accounting for only a small number of employees. Furthermore, even at these wage levels the tax rates in Israel are fairly close to the mid-point of the distribution in the developed countries, although for a married person with children they are still significantly higher than in the US. The comparison also shows that taxes on wages in Israel remain progressive compared to those around the world, but the steep structure which characterized the tax function in Israel has moderated, and today the vast majority of employees pay taxes at lower rates than in most of the developed countries.

Tax rates in Israel were reduced at a time of rapid growth, which is characterized, inter alia, by the promotion of employees; consequently, they ascend to higher tax brackets as their wages increase. Since the tax cuts were particularly large in the upper three deciles of the wage distribution—those in which the tax burden at the beginning of the process was more onerous in comparison with the rest of the world—it is in those categories that the easing of the tax burden is most notable: at a wage level that is twice per capita GDP the average tax rate (for a single person) has fallen from 29 to 26.9 percent, and at the wage level which is four times per capita GDP it has declined from 41.6 to 36.4 percent. By contrast, at the lower wage levels, where most employees are to be found but where the tax burden was less heavy from the outset, the average tax rate has hardly declined at all: a single person whose wage was equivalent to per capita GDP paid 15 percent of his wage in taxes in 2004 and 14.7 percent in 2009. For a married sole bread-winner at that wage level the tax burden even rose slightly, because of the cancelation of tax credits for a non-employed spouse.

An international comparison shows that there is a clear difference between Israel and most of those countries when it comes to the relation between the tax

[1] This amount includes the reduction of employees' National Insurance payments, but not the reduction of employers tax.

[2] For a detailed account of the international comparison of tax rates on wages, see A. Brender, "Tax Rates on Wage Income in Israel in an International Perspective, 2008–2009," Bank of Israel position paper, March 2009 (Hebrew).

Table 1
Taxes on Wages in Israel and the Advanced Economies[a]

Income (percent of per capita GDP)	Israel 2009	OECD average	EU average[b]	US[c]	Difference between Israel and OECD average	Israel's relative rating[d]
	Average tax rate (percent of income)					
Single taxpayer						
50	3.5	17.9	17.8	17.2	-14.4	29
75	10.0	23.1	24.4	20.6	-13.0	28
100	14.7	26.2	28.1	23.8	-11.4	28
133	19.8	29.3	31.8	27.6	-9.5	28
166	23.8	31.6	34.3	29.8	-7.8	25
200	26.9	33.5	36.3	31.4	-6.5	24
400	36.4	37.8	41.4	33.3	-1.3	17
1000	42.5	41.5	45.1	37.1	1.0	11
Married +2						
50	3.5	6.2	10.1	-20.9	-2.7	21
75	10.0	14.5	18.0	0.9	-4.4	20
100	14.7	19.4	22.9	9.7	-4.6	19
133	19.8	24.2	27.9	14.0	-4.4	18
166	23.8	27.1	30.5	16.8	-3.3	18
200	26.9	29.5	32.8	19.3	-2.6	18
400	36.4	35.8	39.5	27.9	0.6	14
1000	42.5	40.1	43.3	34.7	2.4	9
	Marginal tax rate (percent of extra income)					
Single taxpayer						
50	3.5	30.1	33.4	27.1	-26.6	29
75	27.0	35.0	38.9	28.1	-8.0	23
100	35.0	38.5	42.5	38.8	-3.5	17
133	35.0	39.5	44.3	39.2	-4.5	17
166	42.0	41.5	45.9	39.2	0.5	15
200	42.0	44.2	48.4	41.3	-2.2	18
400	46.0	43.5	47.3	39.9	2.5	10
1000	46.0	44.7	48.1	41.8	1.3	13
Married +2						
50	3.5	26.7	31.5	16.8	-23.2	28
75	27.0	32.6	33.2	43.6	-5.6	20
100	35.0	35.3	39.1	25.8	-0.2	16
133	35.0	38.1	41.2	28.1	-3.1	17
166	42.0	39.6	43.2	28.1	2.4	13
200	42.0	43.3	45.6	38.8	-1.3	16
400	46.0	42.7	46.7	35.1	3.3	10
1000	46.0	44.5	47.8	41.8	1.5	12

[a] Simple average of a group of 28 developed countries in 2008. Tax rates include taxes imposed by all authorities, including compulsory payments to the National Insurance Institute and municipal taxes on income. In the US, tax rates are calculated separately for residents of Texas, California and the City of New York.

[b] Simple average of the oldes 15 EU members.

[c] Simple average of Texas, California and the City of New York.

[d] Tax rates of reference group rated from the highest to the lowest: the number in the column minus 1 is the number of advanced economies with a higher tax rate than Israel's.

SOURCE: Based on OECD data, data from the tax bases of the various countries, and Price Waterhouse Coopers, Individual Taxes 2006.

system and the employee's marital status. The tax system in Israel hardly takes marital status into account: men receive no tax credits for being married, and while women receive tax credits for their children, most of these are not utilized, at least not in full.[3] In most of the developed countries, on the other hand, the benefits in the form of tax deductions or credits—both those that are general and those that are given in the form of tax rebates—create a genuine gap in the tax burden between employees who are parents and those who are not, and a prominent example of this is the US. These differences in the structure of the tax system cause different effects on the economy and on society. The benefits to families that are given in other countries reduce the inequality of income distribution and ease the liquidity constraint of employees at times when they have to support their children—at the price of increasing the tax burden at other times. The structure of the tax system in Israel, by contrast, primarily supports the entry into employment of youngsters and mothers, via the low tax rates on single persons and the tax credits by gender respectively.

Table 2
Changes in Average Tax Rates in Israel and the OECD between 2003–04 and 2008–09

	Income level (percent of per capita GDP)	Israel	OECD average	Change in gap between Israel and OECD (percentage points)
Unmarried	50	-1.0	0.1	-1.1
	100	-1.6	1.3	-2.9
	200	-4.0	0.8	-4.8
	400	-6.2	-0.6	-5.6
	1000	-4.8	-1.6	-3.2
Married +2	50	-1.0	-2.1	1.1
	100	1.0	0.6	0.5
	200	-2.6	1.4	-4.1
	400	-5.5	0.3	-5.8
	1000	-4.5	-1.8	-2.7

SOURCE: Calculations by the Bank of Israel based on Price Waterhouse Coopers' Individual Taxes, IMF and OECD data, and data of the tax authorities in the different countries.

[3] The tax credits reduce the average tax rates of a woman with two children by 6 percentage points if her wage is equivalent to per capita GDP (about NIS 8.300 a month), and by 3 percentage points if her wage is twice per capita GDP. In actual fact, the wages of most working mothers are lower than per capita GDP.

d. The public-sector debt and the financing of the deficit

The various trends which characterized the public-sector debt and its components in 2008 were influenced to a great extent by Israel's macroeconomic environment. The public-sector debt/GDP ratio continued to decline, albeit at a far slower rate than in the last few years. The components of the debt also evinced two main shifts: the share of the unindexed debt in domestic capital borrowing plummeted, parallel to the rise in the indexed component; there was also a significant reduction in the share of the external debt in the total debt, while the share of the internal debt rose.

i. The gross public-sector debt and the debt/GDP ratio

The declining trend of the public-sector debt/GDP ratio continued in 2008, albeit at a far slower rate than in previous years.

The (gross) public-sector debt/GDP ratio continued its downward trend in 2008, falling by 1.4 percentage points to stand at 78.0 percent of GDP at the end of the year—a far slower rate of reduction than was evident in 2005–07. The slowing of the rate of decline was due mainly to the 4.1 percent increase in the public-sector debt,[22] after two years in which it declined and the NIS/$ exchange rate remained stable at its 2007 level. The rise in the public-sector debt is the outcome of the increase in the budget deficit and its departure from the deficit limit, low privatization proceeds, and the expansion of the government's deposits in the Bank of Israel (Table 6.8).

The influence of the macroeconomic environment on the public-sector debt in 2008 was expressed particularly in the rise in the debt: beyond the increase in the budget deficit, the rise in the debt is a result of the high indexation payments together with an increase in the government's deposits in the Bank of Israel. The high inflation rate which largely characterized the first half of the year, as well as the 6.3 percent rise in the indexed debt, served to increase the government's indexation payments. In addition, the government's deposits in banks expanded due to net domestic borrowing that was greater than planned (NIS 19.4 billion vis-à-vis NIS 8.7 billion) and also exceeded actual financing requirements. To a great extent the gap between the financing requirement and government borrowing also reflects the macroeconomic conditions which prevailed in Israel in 2008: the crisis in the corporate bond market and the decline in borrowing costs in view of the tendency of investors to prefer more solid channels; uncertainty regarding the depth of the global economic crisis, the decline in the government's tax revenues and the consequent rise in its deficit-financing requirement; the attempt to reduce the risk inherent in rolling over the debt together with the hoarding of resources in order to cover the large redemptions in 2008:IV and the redemptions expected in February 2009 amounting to NIS 20 billion.

The downward trend of the debt/GDP ratio and the government's relatively low financing requirement in recent years contributed notably to the easing of the debt-

[22] Most of the public-sector debt—about 98 percent—is government debt while the rest is the debt of the local authorities, which was down by about 9 percent in 2008 from 2007. The debt of the local authorities includes their debt to banks and bonds less loans which they received from the government via the banks.

Table 6.8
Components of Change in Gross Public Debt in 2007 and 2008

(percent of GDP)

	2007	2008
Debt at the end of year	85.5	79.4
Nominal increase in GDP	-4.2	-4.5
Net borrowing	-1.6	1.9
of which Budget deficit, cash basis	0.0	2.1
Repayment of net credit by the public[a]	-0.5	-0.9
Receipts from privatization	-0.9	-0.2
Total change in the government's deposits in banks	-0.2	0.8
Revaluation of indexed local-currency debt[b]	1.3	1.4
Revaluation of foreign-currency debt	-1.4	-0.3
Remainder[c]	-0.2	0.1
Total debt at the end of year	79.4	78.0

[a] Including credit extended and principal paid.
[b] The rise in the CPI during the year.
[c] Adjusted according to issue price, and rounding. At this stage the data are based on initial assessments, which is why the remainder is still high.
SOURCE: Bank of Israel.

servicing burden in public-sector expenditure, to Israel's economic resilience in the face of external shocks, as well as to the improvement in Israel's credit rating. However, in contrast with 2005–07, when the decline in the debt/GDP ratio was bolstered by rapid economic growth, in 2008 the macroeconomic indicators revealed expectations of an economic slowdown and increased uncertainty. Since the public-sector debt is one of the leading indicators of financial stability, the country's risk premium and the credit rating derived from it are of supreme importance for long-term economic policy that supports the declining trend of both the debt/GDP ratio and the debt.

The government's budgetary discipline in recent years and the public's confidence in monetary policy supported the long-term trend of declining government borrowing costs.

ii. The composition of the debt

The trends which characterized the composition of the debt until the beginning of 2007 represented the government's debt-management policy and various capital-market reforms.[23] The main trend in debt-management policy was the rise in the issuance of fixed-interest unindexed debt, which became the government's principal borrowing instrument, as is customary in bond markets throughout the world. This occurred

[23] Among the various reforms, a particularly notable contribution was made by the reform of pension savings, which led to a significant decline in the share of the non-tradable debt during the period. Another reform which impacted on the public-sector debt was the market-makers reform, which served to increase competition in issues as well as to reduce issuance costs on government bonds.

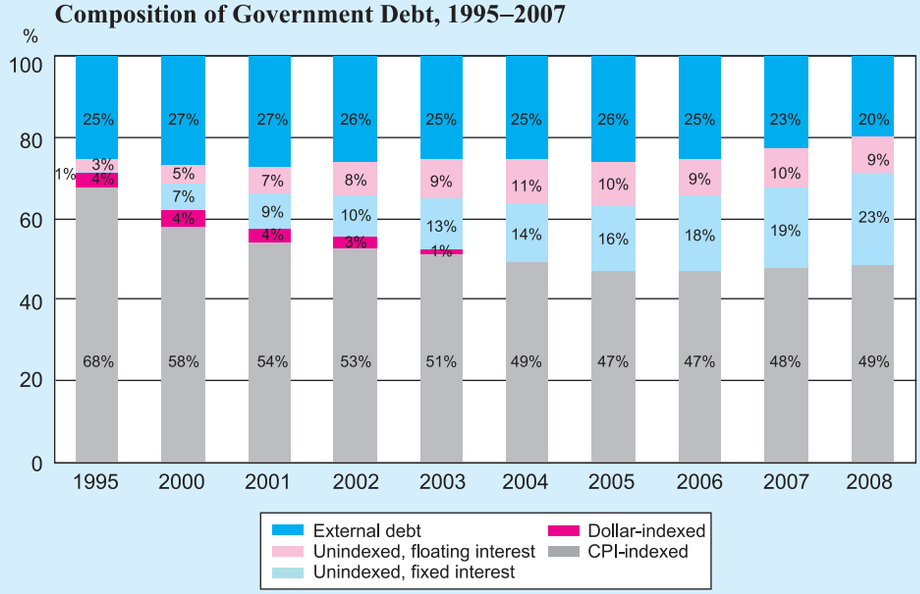
alongside the contraction of the share of the CPI-indexed debt in the wake of the transition to a more stable inflation environment, and the reduction of the use of debt instruments of this kind which have a floating interest rate or are indexed to foreign currency, with the transition to more simple instruments. In addition to the changes in the composition of the internal debt, there was a rise in the extent of international issues, which served to deepen the government's issuance infrastructure and increase the liquidity and tradability of the government's securities. Israel's macroeconomic environment in the last two years—at the start of the global crisis in mid-2007 and with its entrenchment in 2008—also affected the government's debt-management policy and its considerations regarding the desired composition of the debt. This influence was expressed in a number of changes in the composition of the debt.

The deepening of the global crisis in 2008 and its effect on Israel were expressed in shifts in the composition of government debt, between indexed and unindexed debt, and between external and internal debt.

After a protracted downward trend in floating-interest unindexed borrowing, the share of this component of government borrowing increased in 2008, for the second year in succession; the share of the fixed-interest unindexed debt in domestic borrowing declined by 11.2 percent in 2008 and the indexed component rose by 6.4 percent (up by 26.5 percent over 2007). The frequent changes in the Bank of Israel's key interest rate in the second half of the year, and expectations that this trend would persist, appear to have led to the expansion of the floating-interest unindexed component of the debt. Floating-interest unindexed bonds, which are generally short-term, are particularly suitable for periods of great uncertainty.

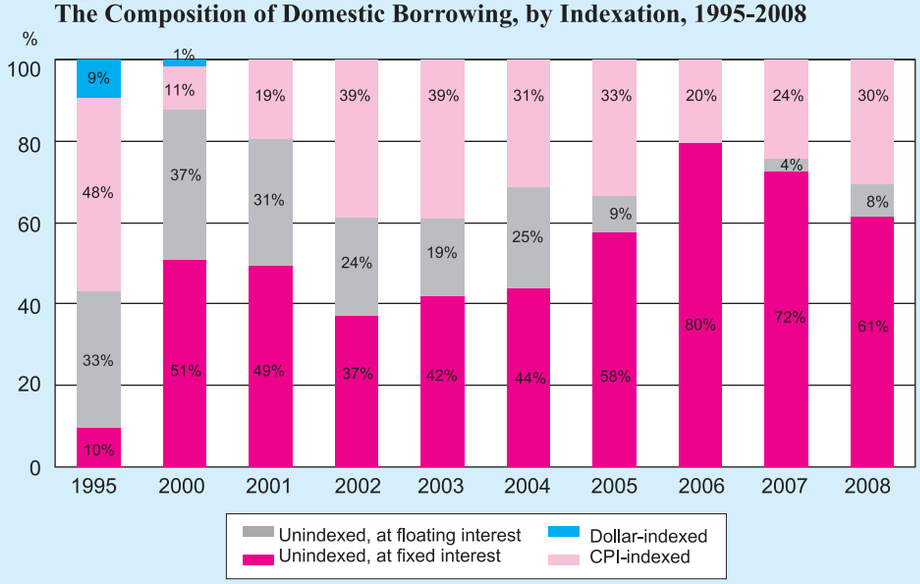
The increase in the indexed component of government borrowing would also appear to be consistent with the exacerbation of the economic crisis and the growing demand for these bonds, because of investors' preference for more solid channels, mainly due to the sharp drop in activity in the primary corporate market for indexed bonds. However, the crisis in the corporate bond market was particularly evident in the second half of 2008, while most of the indexed borrowing occurred in the first half of the year. The expansion of the indexed debt was consistent with the development of inflation and increase in uncertainty. The effect of inflation on the composition of the debt appears to have worked largely via the rise in the (inflationary) risk premium and borrowing costs. When the path of indexed borrowing is compared with inflation expectations (for one, three, and ten years) and actual inflation at the monthly level it can be seen that the government's issuance policy was consistent to a very great extent with actual monthly inflation although not with long-term expectations, despite the long-term nature of the indexed debt. Most of the government's indexed borrowing occurred in the first half of the year, which was characterized by greater volatility in inflation and yield differentials between bonds in accordance with their various indexation categories. Thus, for only two months—April and May—when the interest-rate gap peaked at 2.6 and 3.2 percent respectively, the government borrowed 30 percent of the indexed component of its borrowing. The issue of 3-year indexed bonds, a term which has not been characteristic of indexed bonds in the last few years, attests to the fact that we are witnessing an attempt to make use of the high yield gap to borrow at a low cost.

Figure 6.3a
Composition of Government Debt, 1995–2007



SOURCE: Bank of Israel and Ministry of Finance .

Figure 6.3b
The Composition of Domestic Borrowing, by Indexation, 1995-2008



SOURCE: Based on OECD and Central Bureau of Statistics data.

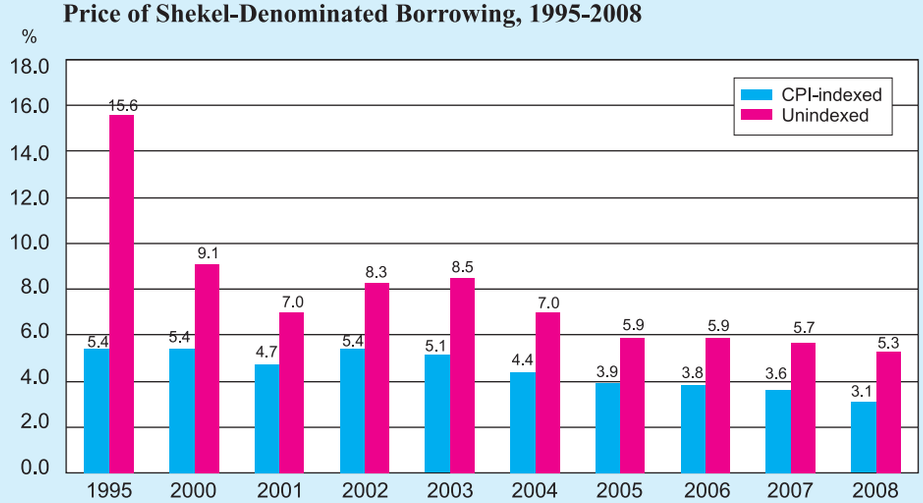
In addition to the attempt to reduce economic costs and risks, as described above, issues of indexed bonds served to reduce the budget (accounting) cost of the debt because, in accordance with the government's decision in 2000, the indexation payments are not included in budget expenditure whereas the interest payments are, and even constitute a heavy burden on the budget deficit. Because of the indexation interest-rate differentials and the fact that they are not included in the indexation payments in the budget, the issuance of indexed debt causes the under-recording of interest payments in government expenditure. Thus, for example, the 0.8 percentage-point increase in the share of the indexed debt in the general government debt enabled the government to avoid recording expenditure of NIS 100 million. This was done at a time when increased economic uncertainty and expectations of an economic slowdown made it more likely that tax revenues would decline. Note, however, that this is solely a recording effect: the expansion of the indexed debt served to increase the budget debt via the indexation payments.

The domestic debt-management policy in 2008 reveals the dilemma between choosing a stable, optimum composition of the debt in a long-term perspective, on the one hand, and the government's need to plan an effective debt policy in an unstable macroeconomic environment, on the other. The government's decision to increase the share of the indexed component of its borrowing attests to the attempt to reduce costs and market risk, thereby serving one of the main aims of debt-management, as published by the Ministry of Finance, namely, to minimize economic and budget (accounting) costs and risks. However, despite expectations of a deterioration in Israel's macroeconomic environment in 2008, in a long-term perspective fixed-interest, unindexed bonds have marked advantages over indexed bonds: their cash flow is constant and known; this is the debt instrument that is most issued and traded in the world; an increase in the share of the unindexed debt helps to reduce indexation in the economy, thereby contributing to monetary stability (indexed debt, which is appropriate for the needs of investors at a time of high inflation, is used today primarily for long-term saving). Furthermore, despite the considerable vulnerability of actual inflation in the course of 2008, inflation expectations for periods of three years or more remain within the target range, reflecting public confidence in the inflation target regime. Consequently, with hindsight it is possible to say that the average cost differentials between indexed and unindexed bonds during 2008 were not high, in spite of the reduction of the term to maturity on indexed bonds and the increase in that period on unindexed bonds.

The average cost differential between indexed and unindexed bonds remained low in 2008.

In addition to the changes in the mix of the internal debt, there was a significant change in 2008 in the mix of the external debt, with a steep decline in foreign-currency denominated debt as well as in its share of the total debt. The external debt is that issued abroad and denominated in foreign currency. The upward trend in borrowing

Figure 6.4
Price of Shekel-Denominated Borrowing, 1995-2008



SOURCE: Bank of Israel and Ministry of Finance .

abroad,[24] which has been evident since 2003 for reasons connected with the management of the external debt, reversed: the share of foreign-currency denominated government debt in total government debt declined substantially, and in 2008 for the first time it stood at 20 percent of the total debt. The share of foreign-currency borrowing in total government borrowing also declined, from 26 percent in 2006 to 12 and 6 percent in 2007 and 2008 respectively. In the wake of the increase in risks and borrowing costs in the financial markets, negative (net) government borrowing exceeded the amount planned by NIS 1 billion. Borrowing via the Israel Bonds arrangement, which is characterized by its easy terms and to which is attributed national significance over and above its financial viability, was in effect the sole source of foreign-currency denominated borrowing in 2008.

In the context of the global crisis, the share of foreign-currency borrowing in total government borrowing fell from 26 percent in 2006 to 12 and 6 percent in 2007 and 2008 respectively.

Apart from the market and liquidity risks[25] involved in issuing government bonds in the international markets, this issue also involves currency risk, as a change in the exchange rate can alter the government's expected cash flow. Although in 2008 (as was the case in 2006 and 2007) local-currency appreciation against the dollar, in

[24] This borrowing includes bonds issued in the framework of Israel Bonds, those issued under US government guarantees, and those on the open market ('free' bonds). Government issues in global markets play an important role in exposing Israel's economy to foreign investors, constitute an additional source of foreign-currency borrowing, create several series of benchmarks, and expand sources of borrowing for Israeli firms interested in going public abroad. However, because of the instability of the international money markets in the last two years no issues were made on the open market in that period.

[25] Liquidity risks, which are calculated by means of the premium required by investors for the problematic nature of exiting from a position in which there is little market volume, are expressed in the difficulty of borrowing large amounts within a short period.

addition to negative foreign-currency borrowing, led to a decline in the external debt in NIS terms, the standard deviation of the exchange rate in 2008 embodied the high currency risk of the foreign-currency denominated debt.[26] Currency risk intensifies in view of the dominance of the dollar-denominated debt in the total external debt (some 89 percent). However, the government's net external balance[27] for 2008 is positive, so that at the macroeconomic level the currency risk in the government's external liabilities would appear to be fairly low. Since the Accountant-General manages the liabilities portfolio separately from the assets portfolio, currency risks affect the desired share of the external debt in total government debt. In actual fact, the result of this was that the government acted to minimize these risks in 2008.

The Ministry of Finance continued to deploy instruments such as swaps to diversify foreign-currency risk in 2008.

In view of the high level of exposure of government debt to the dollar and the share of the foreign-currency denominated debt, the Accountant-General acted to minimize the risks and reduce the exposure of the government debt to changes in the NIS/$ exchange rate. In the framework of the effort to cope with the market and currency risks in the context of the economic crisis the Ministry of Finance began to implement a new strategy of diversifying the foreign-currency risk inherent in the government debt in 2007 by converting part of the dollar debt ($ 750 million that year) into euros by means of a swap transaction.[28] During 2008, too, the Treasury used similar instruments to replace the dollar debt with NIS debt, in the amount of $ 1.2 billion. Some of the swap transactions were executed for debt whose repayment date was February 2009, and this partly explains the increase in the government's deposits in the Bank of Israel and its NIS reserves in 2008.

The most prominent trend regarding the composition of the government's debt in 2008 was the reduction of economic and budgetary risks in both the local-currency debt and the foreign-currency-denominated debt.

Further to the swap transactions, reverse auctions were introduced in 2008 for the early repayment of government debt. The reverse auctions make it possible to smooth and regulate the payment of the principal, thereby reducing market risks. In this framework the Ministry of Finance undertook the early repayment of some foreign-currency denominated bonds (bonds issued under US government guarantee) as well as of domestic bonds, thereby contributing to the reduction of the market risks associated with the repayments intended to be made in 2009. The most outstanding government tendency regarding the composition of the debt in 2008 seems to have been to reduce economic and budget risks, on both the domestic debt and that denominated in foreign currency. The greater efficiency of the financial instruments and the creation of new ones, which were used extensively in 2008, constitute another

[26] For a discussion of the government's exposure to the exchange rate, see: Y. Haim and R. Lavie, "Using the Balance-Sheet Approach to Analyze Financial Stability: An Analysis of the Economy's Resilience to Exchange-Rate Risk," Bank of Israel, Financial Stability Section, Discussion Paper, January 2007 (Hebrew).

[27] The government's net external debt is calculated as the gross external debt less the Bank of Israel's foreign-currency reserves.

[28] In the framework of swaps the government buys bonds before their redemption date, and in exchange transfers to the sellers bonds that it issues. Swap auctions make it possible to smooth bond redemptions, particularly of large series, and reduce rolling over risks as well as market volatility risks. In actual fact, the use of these transactions, in both domestic and international markets, has contributed considerably to the reduction of risks despite the increase in uncertainty in the markets.

expression of the government's efforts to cope with the global crisis and its effects on Israel's financial markets.

iii. Term to maturity and the management of the debt

The average term to maturity of the government debt is an index of its stability and one of the indicators of investors' confidence in the government. The longer the term, the more stable is the government's financial situation perceived to be, because a longer borrowing horizon allays fears of extensive rolling over of the debt due to a temporary crisis in market conditions and enables better borrowing and redemption terms to be obtained. However, at a time of increasing economic uncertainty short-term issues make it possible—by virtue of their far greater liquidity and tradability—to borrow at a lower cost. Thus, in 2008 the focus was on short- and medium-term debt issues, as part of the effort to make government bonds more liquid and tradable. In addition, the government began to use short-term bonds in order to improve the efficiency of its cash flow management as well as to reduce the risks inherent in rolling over debt for long terms.

The average term to maturity of the government's debt remained unchanged at 6.4 years in 2008. The term to maturity of the tradable local-currency debt rose to 6.1 years—the result of a decline in the term to maturity of the indexed debt and a rise in that of the unindexed debt. The term to maturity of the indexed tradable debt dipped in the wake of the issue of indexed bonds, primarily for terms of 3 and 10 years, which are less common terms for indexed bonds, in global and historical terms, despite the moderate increase in the term to maturity. As was the case with the indexed debt, the term to maturity of foreign-currency denominated debt declined in the wake of the net capital borrowing which has characterized the external debt in the last two years. Note that minimizing the cost of the government debt depends on the cost of borrowing in the future. When the level of certainty is low but there is confidence in monetary and fiscal policy it is desirable to increase efforts to borrow for longer terms, especially alongside the deployment of active debt-management instruments such as reverse auctions and swaps.

3. FISCAL POLICY AND GOVERNMENT SERVICES

The sensitive security situation and the expansion of poverty alongside the rise of inequality since the beginning of the last decade, as well as the erosion of the social services, accentuated the need to make decisions about budget priorities.

The sensitive security situation, the rise in poverty alongside increasing inequality since the beginning of the decade, and the erosion of the social services all serve to underline the need to decide budget priorities, particularly in view of the government's fiscal framework of declining deficit targets alongside a moderate rise in expenditure and the reduction of tax rates in accordance with existing legislation. The need to make decisions becomes even more pressing with the expected slowing of economic growth and tax revenues. The challenge facing the government in the coming year will be, therefore, to moderate the expected impact on growth rates, with all that

implies, to create the infrastructure for continued sustainable growth, and to balance this against other needs.

It is important to recognize the existence of clear alternatives in coming to grips with these challenges, and to realize that each one of them has a price: increasing the budget for defense and/or social objectives alongside the reduction of taxes in a contracting macroeconomic environment will cause the deficit and the public-sector debt to grow. Alternatively, raising taxes or failing to reduce them as planned could have an adverse effect on Israel's competitiveness, depress economic activity, and hence hold back the growth rate, particularly during an economic downturn. Finally, the continued reduction of taxes alongside the contraction of expenditure could have an impact on Israel's security needs or social services—depending on the priorities decided. One way or another, it is necessary to find a balance between the various objectives while adhering to maximum transparency as regards the considerations of policymakers.

Because of the stabilization of the fiscal system, and with the rise in the current-account surplus in recent years, policymakers are now better able to deal with questions of budgetary priorities.

Because of the stabilization of the fiscal system, and with the rise in the current-account surplus in recent years, the ability of policymakers to deal with these topics and their expression in budget allocations has grown, attesting to Israel's economic maturity. This is evinced, inter alia, by the moderate growth rate of yields on government bonds despite the rise in the budget deficit, in comparison with the steep rise in deficits at the beginning of the decade (see Figure 4.1).

a. Fiscal policy

The previous government changed the fiscal rules established by its predecessor. There were two main components of the change: first, the real annual rate of increase of the income ceiling on budget expenditure was increased from 1 percent to 1.7 percent; second, the deficit ceiling for 2009 was set at one percent of GDP. While raising the upper limit of expenditure slows the reduction of the deficit, it does not seem to have had an adverse effect on the credibility of the government's commitment to fiscal stability, as a lower expenditure ceiling is difficult to implement beyond the short term. Setting a ceiling for expenditure as a defining and binding framework is perceived as a confidence building measure, both by residents and nonresidents. Setting a limit on the expenditure target has several advantages over adopting other fiscal rules: it is transparent and simple and is less affected by unexpected, cyclical, and uncontrollable factors.

A pre-set expenditure target has several advantages.

However, this target cannot be completely detached from growth rates, particularly changes in assessments of potential GDP. When, alongside total expenditure, the debt/GDP ratio declines and the budget deficit reaches zero, it is possible to be flexible and withstand a crisis deriving from cyclical factors, as is currently the case, or cope with a security crisis, as was the case with the war in the south. Cutting taxes in accordance with this rule sends the public a message of credibility and serves to stimulate the business and private sectors.

Note that if public consumption grows too slowly, the general government sector will have difficulty competing with the private sector for high-quality employees,[29] its employees will provide inferior services, and the government will not be able to achieve its objectives in social spheres.[30] If the government decides to increase the expenditure target it must do so explicitly and transparently—publishing the way in which it intends to finance the expenditure (by increasing the deficit and the debt or by raising taxes) and define the new path of the fiscal indicators derived from this measure in the immediate future, in view of Israel's expected GDP growth rate.

In the longer term the growth path of government expenditure is a means of attaining two main targets: the desired expansion of the government budget at equilibrium and the declining path of the debt/GDP ratio.

In the longer run the growth path of government expenditure is a way of attaining two main targets: the desired size of the national budget at equilibrium and the declining debt/GDP ratio. Assuming that the government defines these aims explicitly, it is possible to derive the long-term growth rate of expenditure from them. The combination of these elements will dictate the tax burden, and hence the annual deficit.

Taking into account Israel's inferior debt position by international standards, paramount importance must be attached to the continued downward path of the debt.

Taking into account Israel's inferior international position with regard to its debt, despite its reduction in recent years, compared with its relatively advantageous position with regard to the tax burden and the public expenditure/GDP ratio (Figures 6.5 and 6.6), supreme importance should be attached to continuing the downward trajectory of the debt. This should be done while constantly monitoring the government's accounts in the long-term budget, thus enabling decisions to be made which maintain the balance between the various fiscal components (for further elucidation of expected scenarios in the perspective of several years, in accordance with the government's decisions, see Section 4 below).

Discussions have recently been held as to whether fiscal policy should act according to the restrictions of the debt/GDP ratio or those of the deficit; each method has advantages and disadvantages. A compulsory debt/GDP path imposes fiscal discipline even at a time of growth, is less affected by bringing forward or postponing expenditure, and is less sensitive to unexpected economic shocks. On the other hand, policy which is derived from the deficit path places more pressure on the government and is more transparent. A recent study[31] which examined this subject concluded that on the whole the two policy regimes are similar, although the debt limitation is more stable and easier to implement.

[29] Y. Mazar, "Testing Self-Selection in Transitions Between Public and Private Sector," Discussion Paper no. 2008.07, shows that employees who moved from the general government to the private sector in 1983–1995 were better qualified (higher 'residual salary') than those who remained in the general government sector, and employees who moved from the private to the general government sector were less well qualified than those who remained in the private sector.

[30] A concrete example of this is the erosion of physicians' wages in recent years and the arbitrator's decision in this respect.

[31] R. Beetsma, M.P. Ribeiro and .A.Schabert (2008), A Comparison of Debt and Primary-Deficit Constraints, CEPR DP no. 6897.

b. The government's services and objectives

The price of cutting social budgets, and transfer payments in particular, is greater inequality of income distribution and more poverty, at least in the short term.

After the unduly rapid expansion of government expenditure until 2002—in particular the rise in transfer payments and disincentives to enter employment—a policy which almost led to a fiscal financing crisis, a policy of stabilization was required. However, the price of the policy measures adopted since then in order to avert this crisis and provide incentives to enter employment, including the reduction of social budgets and transfer payments in particular, was an increase in the inequality of income distribution and more poverty, at least in the short term.[32]

The extent and quality of the public services is estimated on the basis of the per capita civilian public consumption of its components. As can be seen from Table 6.9, these services expanded continuously from 1999 to 2001. When policy was changed, in 2001, they declined, continuing to do so until 2005, while in the last three years there has been a continuous upward trend in them. Altogether, over the last period there has been no real change in this ratio (adjusting for the CPI) in annual terms. The standard of living, as reflected in the rise in per capita private consumption in those years, rose by almost 20 percent (1.8 percent a year), indicating that there has been a continuous erosion of the social services relative to the standard of living in the last period: relative to 1999 the relation between civilian public consumption and private consumption has declined from 35.0 to 31.6 percent. This contrasts with the developed countries, where this ratio dipped slightly during this period, from 34.8 to 34.3 percent. Naturally this erosion, primarily in the area of transfer payments, contributes to the rise in poverty and inequality.

The ratio of civilian public consumption to private consumption declined relative to 1999—from 35.0 to 31.6 percent. Naturally, this erosion, primarily in the sphere of transfer payments, serves to increase inequality and poverty.

From 1999 to 2007 the upper quintile increased its expenditure on health by 34 percent, while the lower quintile did so by only 19 percent.

The rise in inequality in spheres where the provision of public goods is a significant element found particular expression in the area of health. Thus, for example, from 1999 to 2007,[33] when the average private expenditure of a household on health rose by 25 percent in real terms, the increase in this expenditure by the upper quintile was 34 percent, and only 19 percent by the lower quintile. By contrast, average private expenditure on education rose by 17 percent (data to 2006), without any real widening of the gaps. Since private expenditure on education and health expands in step with income, another indicator of the rise in inequality is the standard deviation of the expenditure. The coefficient of change of private expenditure (the ratio of the standard deviation to the mean) rose by 15 percentage points in this period in expenditure on health, compared with stability in expenditure on education (Figure 8.9 presents the

[32] For further elucidation of the widening gaps and the effects of policy and growth, see Chapter 8 in this volume and in past editions of this publication, as well as A. Brender and L. Gallo, "The Effect of Changes in Wages, GDP, and the Demographic Characteristics of Employees on Hours Worked," Economic Quarterly (2008) (Hebrew). The authors show that economic growth increased the hours worked by most employees, but not of those who came from low-income families, so that in effect it served to widen economic gaps in Israel. See also, Israel Democracy Institute (2006) "From Welfare to Work: Economic Policy for Continued Economic Growth and Recovery," Policy Research 62, July (Hebrew), and Leah Achdut, Miri Andelbald, Zvi Sussman, and Rafaela Cohen (2005), "Social Aspects of the National Budget: 2001–2006," paper presented at the First Annual Conference on the Economic and Social Program, Van Leer Institute (Hebrew).

[33] Based on the CBS's Survey of Family Expenditure.

Table 6.9
Indicators of Changes in Civilian Public Expenditure and Defense Expenditure, 1999–2008

(NIS '000 per capita, adjusted by the CPI—2008 = 100)

Year	Public civilian expenditure[a]	Health	Education	Transfer payments to the public	Total defense expenditure (net)[b]	Private consumption	Civilian public sector employees as percent of total civilian employees
1999	16.6	4.5	6.6	11.5	7.3	47.3	30.3
2000	17.1	4.4	6.9	11.9	7.3	50.3	29.9
2001	17.7	4.5	7.2	12.6	7.5	50.7	30.5
2002	17.4	4.4	7.0	12.1	8.1	49.3	31.2
2003	16.9	4.2	6.5	11.6	7.5	48.3	31.1
2004	16.9	4.2	6.7	11.4	7.0	50.5	30.1
2005	16.8	4.2	6.6	11.3	7.0	51.7	30.1
2006	17.0	4.1	6.8	11.5	7.4	52.6	29.8
2007	17.6	4.3	7.0	11.6	7.1	55.3	29.7
2008	17.9	4.4	7.1	11.8	7.0	56.5	29.1

[a] Including items not mentioned elsewhere.

[b] Excluding the opportunity cost of soldiers in the regular army.

SOURCE: Based on Central Bureau of Statistics data.

Because of the changes which have characterized the ratio between government consumption and private consumption in the last thirty years, it is difficult to know if its decline in recent years is a correction of the rise in the preceding years.

gaps in private expenditure on health by quintiles, and gives details of sub-categories of expenditure).

A more extensive examination over a 30-year period shows that in the wake of the wage agreements of the mid-1990s which led to the crowding out of private consumption in the following two years, the relation between public and private consumption rose to 37 percent in 1997, falling subsequently to reach the average for the entire period—31 percent—in 2008. Because of the changes in this ratio over the years it is difficult to assess whether its decline in recent years is a correction of the rise in it in the preceding years or a deviation, and if so, whether an upward correction is to be expected in the near future.

Whereas the extent of accepted inequality is largely a socio-political issue, inequality also has economic implications which have to be tackled. One of these is in the sphere of social mobility; if due to inequality the weaker socio-economic strata and their children are unable to acquire human capital that is commensurate with their abilities,[34] this has an impact on economic efficiency which goes beyond social preferences.[35] By international standards, the gaps in achievements in PISA and other international tests between pupils from different socio-economic backgrounds in Israel, as well as the variance in pupils' achievements, between schools, and especially within schools, are among the highest in the world.[36] These will be translated in the future into extensive economic inequality.

Another repercussion deriving from the expansion of inequality relates to the credibility of the fiscal policy path, and apprehensions regarding the provision of solutions which are temporary and inefficient. The government's targets include reducing poverty and inequality; thus an increase in them—and in public awareness of them—raises the pressure on the government to act to reduce them by expanding benefits. However, inequality that is too low also has a price: the incentive to work and invest in human capital diminishes, the heavy tax burden depresses investments, and at

[34] Y.D Maoz and O. Moav (1999), "Intergenerational Mobility and the Progress of Development," The Economic Journal, 109.

[35] The data for Israel do not provide an answer to the question as to the extent to which this subject constitutes a problem. A study which examined the phenomenon in 1983–1995 showed that within a period of about ten years two thirds of poor people emerged from poverty, but the rate among adults with a low level of education and Arabs (even adjusting for the effect of education) is significantly lower. See Moshe Shaio and Michael Waknin (2000), "Ongoing Poverty in Israel: Initial Results from the Combined Results of the Population and Habitation Census, 1983 and 1995," in Towards a New Welfare State in Israel, Maurice Falk Institute of Economic Research (Hebrew). Another paper found that the intergenerational correlation between the education of parents originally from North African countries and their children did not stem from environmental influences, N. Sussman and R. Frisch (2009), "The Environmental Influence of the Environment in which Parents Grew Up and their Education on the Education of their Children," Bank of Israel Discussion Paper (Hebrew). The study also shows that for all Jews in Israel the simple intergenerational correlation between education and wage elasticity is 0.2, at the lower level of the estimates in the developed countries, meaning that intergenerational mobility is relatively high.

[36] For further elucidation, see Chapter 8, Welfare Policy Issues, in this volume.

a time of globalization a brain drain is possible.[37] If the government does not develop efficient tools for coping with these problems, the increase in political pressure could lead it to use available policy instruments, even if they are not the most efficient.

If the government cannot develop efficient tools for tackling poverty, growing political pressure could lead it to use available tools, even if they are not the most efficient.

The way the government handles the crisis in higher education, and particularly in the universities, which receive government support, is an example of this. In view of the brain drain[38] and the deterioration in the other parameters by international standards, a significant budget increment is required. The recommendations of the Shohat Commission, most of which were accepted by the government, included supplementing the universities' budget allocations alongside increasing tuition fees, but pressure from the students appears to have prevented the latter. Two recent studies show that the government could raise tuition fees while providing grants to needy students, thereby averting an extensive impact on welfare. According to one article, 37 percent of persons in Israel with a first degree are over-educated,[39] and according to the second,[40] five percent of high-school pupils are unable to study because of a liquidity constraint; these youngsters can and should be helped through grants.

A post-hoc examination of priorities in the composition of public expenditure, as indicated by the development of government expenditure in the last few years, shows that in spite of the changes in the extent of public expenditure—a rapid rise until 2002 and a decline since then—its composition (excluding interest) has hardly changed at all since the late 1990s (Table 6.10). While the share of one component or another changes for brief periods as a result of exceptional developments—such as the security situation in 2001–03 and 2006 and the increased share of National Insurance benefits in 2001—over a period of several years the composition has remained fairly stable, expressing the failure to make decisions regarding priorities. In the last two years the share of defense expenditure has fallen slightly in favor of a rise in social budgets, including education, which has had the highest share of social expenditure since the beginning of the decade. However, while it is too soon to tell whether this expresses a decision about priorities, there are other signs that a decision of this kind has been made, including a long-term plan to increase the education budget.

In the last two years the share of defense expenditure has declined slightly in favor of a rise in social budgets, including in education, the share of which is the highest since the beginning of the decade.

In 2007, for the first time, the government defined employment and poverty targets for the coming years (starting in 2008). This constituted an important step forward, whose implementation in the next few years should be subject to examination. The mere fact that the government has defined quantitative social objectives makes it easier to examine their results—although an effort should be made to ensure that

In 2007 the government took an important step in defining employment and poverty targets for the coming years.

[37] E. Gould and O. Moav (2008), "When is 'Too Much' Inequality Not Enough? The Selection of Israeli Emigration," CEPR, DP 6955.

[38] Dan Ben-David (2008), "Brain Drained," CEPR, DP 6717.

[39] G. Aisman, A. Tur-Sinai and D. Romanov (2008), "Over-Education, Occupational Mobility, and Income Mobility Among Recipients of First Degrees in Israel," Working Paper, Central Bureau of Statistics (Hebrew).

[40] Y. Friedman and R. Frisch (2008), "The Effect of the Liquidity Constraint on Access to Higher Education," Discussion Paper, Bank of Israel (Hebrew).

Table 6.10

Composition of General Government Expenditure by Type of Expenditure[a], 2000–08

(percent of total government expenditure, excluding financing expenses)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
A. Public items									
1. Defense	18.5	18.1	19.6	19.1	18.5	18.5	19.0	18.2	17.9
2. Government services[b]	8.6	8.5	8.6	9.0	9.0	9.3	9.2	9.3	9.3
B. Welfare expenditure	**63.6**	**64.5**	**62.7**	**62.9**	**63.1**	**63.5**	**62.0**	**63.0**	**63.6**
Total welfare expenditure	17.8	17.8	17.3	17.0	17.8	17.8	17.6	18.1	18.4
1. Education	11.3	11.1	10.8	10.9	11.2	11.3	10.8	11.1	11.3
2. Health	2.1	2.1	2.0	2.1	1.7	2.0	1.7	1.4	1.4
3. Housing and community services[c]	3.7	3.6	3.4	3.5	3.2	3.2	3.2	3.2	3.2
4. Sport and religion	28.8	29.8	29.1	29.4	29.3	29.2	28.7	29.1	29.2
5. Social insurance and welfare[d]									
C. Economic services[e]									
Investment in transport infrastructure[f]	1.7	1.7	2.0	2.3	2.2	1.7	1.7	1.5	1.3
Other[g]	6.0	5.6	5.5	5.1	5.6	5.4	6.5	6.3	6.2
D. Quality of environment	**1.5**	**1.6**	**1.5**	**1.6**	**1.6**	**1.6**	**1.6**	**1.7**	**1.6**

[a] This table is based on Central Bureau of Statistics calculations following the definitions used in the National Accounts. Expenditure in each item includes current expenditure and investment.

[b] Including general administration, foreign relations, public order, police and justice.

[c] Including mortgage subsidies.

[d] Including transfer payments to households and welfare services.

[e] Including economic administration, agriculture, forestry, fisheries, quarries, manufacturing, construction, electricity, gas, water, roads, transport, communications, the subsidy component in loans to the business sector, and general research.

[f] Including investment in construction of roads, in the railways, seaports and airports. Investment in roads does not include investment by Derech Eretz Highways Ltd.

[g] Including subsidies of public transport, agriculture and domestic production, transfer payments on the capital account, the Industry Research Fund, and fuel subsidies.

SOURCE: Based on Central Bureau of Statistics data.

setting quantitative targets does not lead to their artificial attainment instead of getting to grips with the problem.

Determining an employment target is apposite, as its attainment is affected by both the participation rate (positively) and the unemployment rate (negatively).

The employment rate target set for 2010 for persons aged between 24 and 65 is 71.7 percent—a two percentage-point increase over 2007. The adoption of an employment target is praiseworthy, since its achievement is affected (positively) by the participation rate as well as (negatively) by the unemployment rate. The employment rate of this age group continued to rise in 2008, albeit at a slower pace, to stand at an average of 71 percent—one percentage point higher than in 2007. In view of the composition and nature of the population, as well as the expected decline in demand, the target will not be easy to attain. In Israel there is a large untapped reservoir of manpower, as is indicated by the low labor-force participation rate—less than 57 percent. Diverting this reservoir—which includes ultra-orthodox Jews, Arabs, and a large

proportion of the residents of peripheral areas—to the labor market could constitute a tremendous impetus for the economy. In order to achieve its aims, the government will have to allocate adequate and well defined budgets for dealing with these specific populations.[41]

Another social objective set in the framework of the government's social-economic agenda was in the area of poverty. According to this, between 2008 and 2010 the real income of families in the lowest quintile should increase on average by at least 10 percent more than the per capita GDP growth rate. The real income of a family in the lowest quintile rose by 1.9 percent in 2007, after growing by 6 percent in 2006. In other words, if the target had been instituted already in 2006 it would have been attained on average in the course of 2006–07, but not in 2007 alone (for a discussion of the target, see Chapter 8 in this volume).

In September 2008 the government decided for the first time to set targets, objectives and performance measures for the various ministries' new projects, thus making it possible to follow up on both their implementation and the attainment of the targets. For this purpose a 'government performance' system will be established to improve the follow-up and monitoring of the performance measures. Changes will also be made to the format of proposals for government decision, adding a classification by subject, clear timetables for checking adherence to performance measures and an account of possible adverse effects. The implementation of this decision could improve the processes of the government's work in the spheres of planning, measurement, and monitoring, thus serving to increase its efficiency and improve the utilization of its resources.

The implementation of the 'government performance system' will improve the processes of the government's work, and will serve to increase its efficiency and improve the utilization of resources.

The development of performance measures and assessments of the activity of public entities received a significant boost in the developed countries in 1993, when the US federal government required all federal agencies to clearly announce the objectives of their activities, clarify the operational targets they aspired to achieve, and develop tools for measuring them. At the beginning of the present decade the OECD published similar recommendations, and currently 26 of its members refer to performance measures in their decision-making processes, most of them having initiated new projects for measuring the results of government activity in the last few years. Because of the high cost of measuring activity and fears that a multiplicity of measures would divert attention from the main parameters for measuring performance, it is recommended that the focus be placed on the strategic aims of the entities examined, requiring first and foremost that these aims be clearly defined. The appropriate development of aims is based on their lucid, measurable definition, since only once that is done can the availability of data be examined. If this sequence is not adhered to, the measurement may be biased towards the data that are available even if they are not suitable. This approach to constructing indices is the principal means by which the process of data collection can be improved. It is of paramount importance for the measurement and the objectives to focus on results rather than on the products of the system. In time,

[41] For further elucidation of employment rates among the various groups, see Box 5.2.

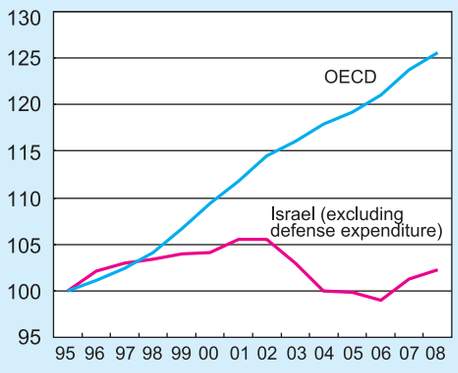
processes of this kind can lead to better methods for measuring specific parameters, as a result of the learning process and the improvement of information.

c. International comparison

The gaps between Israel and the developed countries with regard to the extent of their civilian services, and possibly also their quality, widened in the last few years.

Real per capita civilian public consumption in Israel rose from 1995 until 2001, declined in 2002–05, and rose again in 2006–08; in cumulative terms it has hardly changed at all in the last fourteen years. This attests to stagnation in the extent of the services (unless they became more efficient). In contrast, in the developed countries real per capita civilian public consumption has risen by 1.8 percent a year,[42] so that the gaps between Israel and the developed countries in the extent of civilian services, and possibly also in their quality, have widened in recent years. The rapid development of these disparities may be seen from Figure 6.5: in Israel real per capita civilian public consumption rose by 2 percentage points while in the other countries it rose by 26 percent.[43]

Figure 6.5
The Change in Per Capita Real Public Expenditure in Israel and the OECD (Index, 1995 = 100)



SOURCE: Based on OECD and Central Bureau of Statistics data.

The explanation of the difference between the practically static real per capita civilian public consumption, shown in Figure 6.5, and the relatively high growth rates of per capita civilian public consumption deflated by the implicit price index of business sector product, shown in Table 6.2, is the fact that the increase in public consumption prices in Israel outstripped the rise in GDP prices (the measurement in business-sector product prices reflects the burden of government finance in this sector). This was due to the rise in the real wage in the general government sector, primarily at the beginning of the decade. Civilian public consumption prices relative to those of GDP rose faster during this period in Israel than in the developed countries, and hence in the latter no increase was recorded in the share of public expenditure in GDP alongside the increase in per capita civilian public consumption. In other words, in Israel, in contrast with the developed countries, the resources which were diverted to civilian public consumption were expressed in a rise in prices (wages), but not in the quantitative expansion of services.

[42] Most of the difference is explained by the fact that Israel's population grew far more rapidly in that period than those of the developed countries—by 2.2 percent a year vis-à-vis 0.6 percent respectively. Another explanation is that per capita GDP in Israel rose by less.

[43] The quantitative change is the nominal change adjusted for overall civilian consumption prices.

Israel is situated at the mid-point of the distribution of the developed countries as regards the share of public expenditure in GDP. In seven of the twenty countries in the reference group the public expenditure/GDP ratio is greater than it is in Israel, and in six of them it is similar to Israel's (Figure 6.6). The decline in this ratio in Israel in recent years almost completely closed the gap between it and the developed countries that had developed in the previous ten years (Table 6.6, lower panel). Below Israel are the English-speaking nations, Japan, Spain, and Norway. Taking into consideration the fact that some of Israel's defense expenditure (about 1.5 percent of GDP) is regularly financed by the US government, Israel is even below the average of the developed countries.

Israel is situated at the mid-point of the distribution of the developed countries as regards the share of public expenditure in GDP.

An international comparison of the composition of expenditure shows that in Israel the share of defense expenditure and debt-servicing payments is far higher than it is in the developed countries; the share of spending on education and health is similar to theirs (because of the difference in the age-composition, expenditure on education as a share of GDP is higher in Israel, and the share of expenditure on health is lower[44]), and the share of transfer payments in Israel is far lower than theirs.

The differences between countries in the public expenditure ratios, shown in Figure 6.6, reflect differences in worldviews, in the tendency to take risks, and in social attitudes between those advocating as low a level of public expenditure as possible alongside a lighter tax burden (mainly the English-speaking countries)—inter alia, in order to avoid putting pressure on efficient market forces—and most European countries, which elect to have a relatively high level of public expenditure and a heavier tax burden, even if this could have an adverse effect on the efficiency of the economy by altering the allocation of market resources. There is no unequivocal answer, even in economic terms, to the question of which school Israel should belong to, as within the range of a reasonable public expenditure/GDP ratio it has not been proved in the last ten years that there is an empirical relation between the extent of government expenditure and the GDP growth rate.[45]

Given the budget constraint, the mirror-image of the public expenditure/GDP ratio is the tax burden. In Israel in 2008 it was below the mean and median of the developed countries (Figure 6.7), so that progress in the process of cutting taxes, beyond the path determined by law, will bring it to an even lower level.[46] The need to reduce Israel's debt/GDP ratio to the level accepted in the developed countries is not consistent with a tax burden that is lighter than theirs, and expenditure that is expected to rise. Note that countries which are to the left of Israel on the scale are characterized by larger than

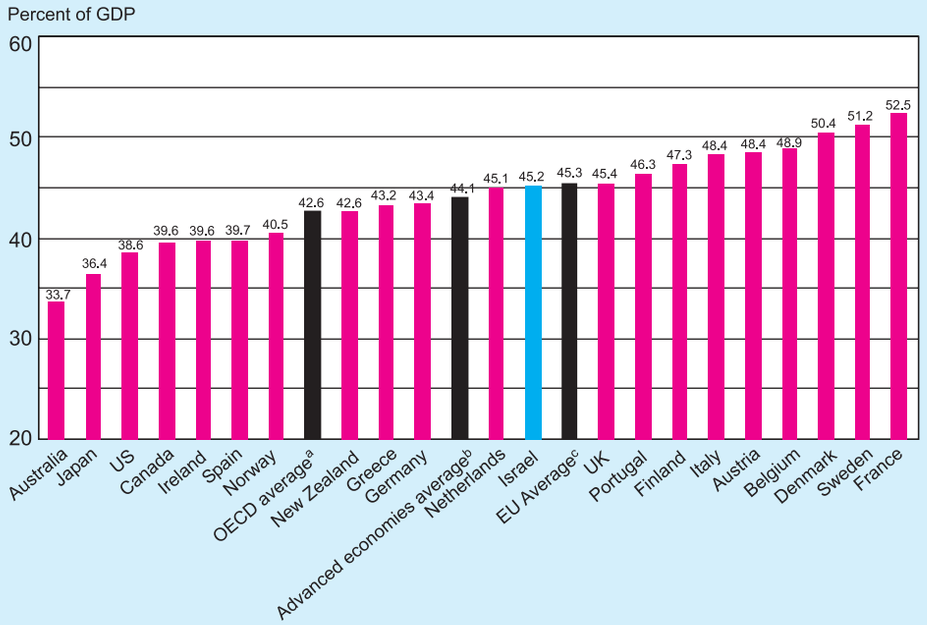
The need to reduce Israel's debt/GDP ratio to the levels accepted in the developed countries is not consistent with either its debt burden, which is lower than theirs, or its expenditure, which is expected to rise.

[44] The average share in GDP of total public expenditure on the elderly is 7 percent in the developed countries (as of 2005), compared with 4.2 percent in Israel. After adjusting for the difference in the age composition, this amounts to 6.5 percent of GDP.

[45] See, for example, Sala-i-Martin in footnote 4 of Box 6.1.

[46] Figure 6.6 compares the tax burden in Israel in 2008 and that in the developed countries in 2007. According to assessments, in 2008 the tax burden in the developed countries will dip only slightly—by less than 0.5 percent of GDP.

Figure 6.6
The Share of Public Expenditure in GDP in Israel, Selected Advanced Economies, and OECD and EU Averages, 2008



[a] Arithmetic mean of all OECD countries except for Turkey and Mexico.
[b] Arithmetic mean of 20 advanced economies.
[c] Arithmetic mean of the EU countries that are also members of the OECD.
SOURCE: Based on OECD and Central Bureau of Statistics data and OECD Economic Outlook 84, November 2008.

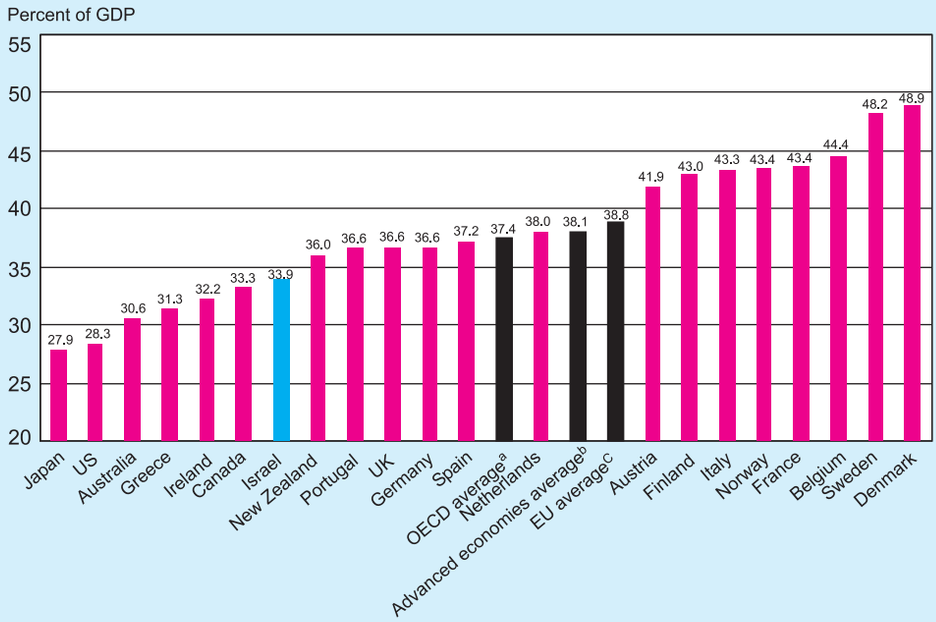
average deficits. These include the US and Greece, where the general government deficit has averaged 3.6 and 4.5 percent respectively in the last five years.

The reduction of the debt/GDP ratio in the last six years has helped to reduce the risk ascribed by investors—whether residents or nonresidents—to Israel's economy.

The annual deficit/GDP ratio is generally determined by the difference between the share of expenditure and the tax burden. The flow of annual deficits determines the debt/GDP ratio. This ratio and its development are the principal indices which determine a country's level of risk. A low risk contributes to sustainable and accelerated growth, primarily via the investment channel. The process of reducing the debt/GDP ratio in the last six years has made a signal contribution to reducing the risk which investors—whether residents or nonresidents—attribute to Israel's economy.[47] Evidence of this is the reduction of Israel's risk premium during the last period (Figure 2.7b) and the rise in its credit rating. A high credit rating enables a country, banks, and the other financial entities which operate in it to borrow at a lower interest rate, so that over

[47] The gap in the net public debt ratio (adjusting for financial assets) between Israel and the developed countries is greater than that in the gross debt. However, international comparisons of the net debt are not reliable because of inter-country differences in the level of information, the extent of coverage, and definitions. For these reasons, the gross debt was chosen as the criterion in the European Union's Stability and Growth Pact.

Figure 6.7
The Tax Burden in Israel, Selected Advanced Economies, and OECD and EU Averages, 2008



[a] Arithmetic mean of all OECD countries except for Turkey and Mexico.
[b] Arithmetic mean of 20 advanced economies.
[c] Arithmetic mean of the EU countries that are also members of the OECD.
SOURCE: Based on OECD and Central Bureau of Statistics data and OECD Revenue Statistics 2008.

time debt-servicing payments decline and there is more money available for services or for further reducing taxes.

The rapid growth of Israel's population, which expands its future potential GDP, makes it possible to choose a slower path of convergence to the target levels. Since, however, Israel's age composition is younger than that of the developed countries,[48] resulting in a lower dependency rate,[49] it is currently able to reduce the debt/GDP ratio more rapidly, with the knowledge that with time it will converge to dependency rates that are similar to those in the developed countries. Furthermore, the security risk in Israel is greater, and this requires that the debt be lower. Consequently, a decision

[48] For a discussion of the effect of expected demographic developments in Israel until 2020 on government expenditure, see Koby Braude (2003), "The Effect of Demography on Public Expenditure in the Long Term," Economic Quarterly, 50, December (Hebrew). In 2015 the gap between the composition of the age-distribution in Israel and the developed countries will be even greater, according to Education at a Glance, p. 160.

[49] Note in this connection that Israel's population is also aging, and the growth rate of its labor force is expected to decline from 2.5 percent in 2000–2005 to 1.5 percent in 2010–2015. According to predictions, in 2050 for every old-age pensioner there will be on average 2 or 3 persons in the labor force, as compared with 4 today.

has to be made about the desired path on the basis of inter-generational allocations, and this decision will involve taking risks. Note, too, that the debt/GDP ratio was reduced while the economy was in the positive part of the cycle, and that once demand contracts it will be far more difficult to continue reducing the debt.

4. AN ANALYSIS OF THE NATIONAL BUDGET: A LONG-TERM VIEW

a. The background and the state of the budget in 2009

The government has not yet tackled the gap between the long-term expenditure determined by law and the expenditure path required to finance its medium-term spending commitments in various spheres.

The government's budget performance in 2008 has significant implications for fiscal policy in the years to come. The government did not manage to get the 2009 budget approved by the Knesset, hence since the beginning of the year it has been operating on the basis of a restrictive budget framework based on the 2008 budget, which limits its ability to decide on any new courses of action within the expenditure framework. The government also avoided dealing with the large discrepancy that has emerged over the last two years between the long-term expenditure ceiling determined by law and the path of expenditure required to finance its medium-term (approximately five year) spending commitments adopted in the areas of defense, welfare, and the infrastructure.[50]

The government needs to make crucial decisions regarding expenditure and the deficit .

In 2008, after several years in which an ambitious consolidation plan based on reducing expenditure was pursued, the budget deficit swelled due to a fall in tax revenues resulting mainly, as stated, from cuts in tax rates and developments in the financial markets. In 2009 the revenues are expected to decline even more, this time largely due to the economic downturn. Consequently, the deficit is expected to grow (due to the effect of the automatic stabilizers) and deviate sharply from the ceiling of one percent of GDP determined by law. This will be the case even if expenditure does not exceed the upper limit.[51] This confronts the government with the need to make several crucial decisions: 1. Whether to cancel or raise the deficit target; 2. To try and achieve the target despite the slowdown by officially cutting expenditure when the 2009 budget is approved, or by avoiding the full utilization of the budget and/or increasing tax rates; 3. To temporarily expand expenditure (and the deficit) even beyond the direct effect of the downturn, in order to try and moderate the decline in economic activity. The discussion in Box 6.1 above shows that the effectiveness of an expansionary policy depends to a great extent on the amount of risk ascribed to the economy while it is in effect, as this is expressed, inter alia, in the debt/GDP ratio. If the expansion is adopted in a policy environment in which fiscal consolidation in the medium- and long-term is credible, and it does not expose the economy to

[50] For a detailed account of the discrepancies, see the equivalent part of the 2007 issue of this publication.

[51] The government decided to implement several plans, amounting to NIS 5.8 billion, in order to ease the credit crunch (most of the expenditure is expected to be implemented after 2009). The payments in respect of these plans are formally subject to the expenditure ceiling, but are not recorded as part of the budget deficit. Thus, the discussion that follows is based on the assumption that the credit extended in the framework of these plans will be independent of the expenditure ceiling of the budget.

unduly great risks while it is being implemented, the economic forces which offset its impact may be expected to be relatively weak, enabling the expansion to contribute to economic activity. If, however, the crisis exposes the government to financial risks which are reflected in the exacerbation of the deficit and the debt, the risk premium on the government's debt, and consequently on the economy as a whole, will rise, and the expansion of the deficit could cause a further slowdown in economic activity. This is in fact what occurred in Israel in the early 1980s and at the beginning of the current decade.

The consolidation of recent years and the stability of the banking system have put Israel's economy in a good position to cope with the expansion of the deficit in the short term as a result of the slowdown.

The consolidation of the last few years, together with the stability of the banking system, put Israel's economy in a good position for coping with the expansion of the deficit in the short term as a result of the slowdown. The continuous reduction of the deficit until it reached zero in 2007 accorded credibility to the government's commitment to reducing the deficit and the debt/GDP ratio. Similarly, the stability of the banking system allays fears that the government will have to inject large amounts in order to rescue banks in financial distress, as has recently been the case in many countries. Nonetheless, at the present point of departure, Israel's debt/GDP ratio and deficit are higher than those of most of the developed countries, and in addition considerable liabilities have accumulated for the coming years in order to fund the government's long-term policies. This comes in addition to the constant risk with regard to security and political developments, which can give rise to extensive unplanned expenditure. Consequently, in order to increase the chances that an expansionary policy, or one which will enable the automatic stabilizers to act, will have a positive effect on economic activity in the short term, what is required now more than in the past is a plan that will make it clear how the government intends to return to a more robust deficit and debt/GDP ratio path once the downturn comes to an end. Credibility of this kind requires not only a general commitment to a trajectory of convergence to the target but also decisions and legislation regarding the specific measures which will promote this.[52]

To improve the chance that expansionary policy will have a beneficial effect on economic activity in the short term, the government should come up with a plan that will clarify how it intends to converge to a more sustainable deficit path and debt/GDP ratio once the crisis is over.

The effect of the discrepancies between the expenditure ceiling and the cost of the plans adopted by the government is not restricted solely to the risk ascribed to Israel's economy and its ramifications—a subject which has grown in importance as a result of economic developments in the domestic and international arenas. The government's long-term decisions were made on the basis of its perception of the social needs and provision of public goods which had not been fully met during the period of consolidation. Since in many cases the plans do indeed fulfill real needs, it is important to define a credible long-term budget framework which, as well as making a macroeconomic contribution, will also increase the confidence of the public that the programs eventually adopted by the government will actually be implemented.

A credible long-term budget framework will increase confidence among the public that the plans adopted by the government will be implemented.

[52] For a more extensive discussion of this issue, see A. Brender (2008), "Targets or Measures? The Role of Deficit and Expenditure Targets in the Effort to Attain Fiscal Consolidation in Israel, 1985–2007," Israel Taxation and Economics Quarterly, 33 (129), November (Hebrew).

In order to examine the conditions confronting the government and the Knesset as they decide the fiscal policy trajectory for the coming years and the structure of the 2009 budget, we present below an analysis of expected budget developments in the coming years given four different scenarios, reflecting two alternative assumptions regarding budget policy and two possible paths of economic activity. The policy alternatives are: 1. Adhering to the present expenditure ceiling while canceling the deficit ceiling, thus enabling the automatic stabilizers to operate; 2. Adapting the expenditure ceiling in such a way as to facilitate the implementation of the government's long-term plans without having to decide on additional cuts. The growth paths are delineated below, with one of them being based on the Bank of Israel's current forecast, and the other examining developments in the case of a more protracted economic slowdown.

b. The framework and assumptions of the analysis

In order to examine the expected development of the budget aggregates in 2009–12 on the basis of the policy altgernatives described above, we used a model for the long-term analysis of the budget based on the past trajectory of the development of the fiscal variables[53] and the government's decisions about future policy. The model includes estimates of the budgetary implications of government decisions about specific measures for the next four years, and examines the expected development of the budget aggregates if they are implemented.[54] The forecast is based on many assumptions, as specified below

A policy variable which exerts considerable influence on the forecast is the expansion of the defense budget in the next few years. In 2007 the government adopted a long-term path for defense expenditure along the lines of the recommendations of the Brodet Commission. The assumption underlying the following analysis is that the defense budget will increase along that trajectory. Within that framework defense aid from the US government is also expected to rise, thereby increasing the defense budget. According to current recording rules, this increase is included in the calculation of the overall expenditure ceiling, and has therefore been treated as such in our calculations.

The basis of the analysis is the 2009 budget proposal submitted to the Knesset by the government. However, several policy measures which accompanied the budget proposal and were intended to reduce expenditure were not implemented, so that adhering to the framework might require the approval of extensive alternative measures this year, too. At the end of 2008 the government brought forward expenditure in the amount of NIS 4.4 billion from the 2009 budget at the expense of the 2008 budget—

[53] For a more detailed account of the analytical framework, which is updated continuously, see K. Braude and A. Brender, "The Effect of the Economic Program on the National Budget in 2003–08," Bank of Israel, July 2003.

[54] The analysis of expenditure for 2009 is based on the government's budget proposal. The forecast of revenues is based on the present macroeconomic environment, which differs from the one that prevailed at the time the budget was prepared, in the summer of 2008.

thereby making it easier to attain the expenditure ceiling. The budgets of the last few years have also been characterized by marked under-utilization, the reduction of which leaves further room for avoiding exceeding the expenditure ceiling.[55] The analysis also assumes that the government will use NIS 4 billion of its financing surplus in 2008 to finance the deficit in 2009, reducing the rise of the debt this year proportionately. In contrast, the plans for dealing with the credit crisis will increase the debt even though they are not included in the calculation of the deficit.

The main assumptions underlying the long-term forecast of the development of the budget

- Real GDP will decline by 1.5 percent in 2009 and rise by 2.3 percent in 2010, by 4.0 percent in 2011, and by 5 percent in 2012. GDP will increase subsequently so that the output gap which will develop in 2009 and 2010 will be closed by 2013. Potential GDP is calculated on the assumption that labor productivity will rise at a similar rate to the average of the last 35 years.
- Real wages will rise in 2009 and subsequently at a similar rate to the increase in labor productivity.
- The real return on bonds issued by the government in 2009 and subsequently will be 4.0 percent, similar to the average of the last ten years (6.5 percent on unindexed bonds).
- CPI and GDP prices will rise by 2 percent a year except in 2009[56], when the CPI (annual average) and GDP prices will increase by 1 percent. The working assumption in this analysis is that the NIS/$ exchange rate will be NIS 4.2 at the end of 2009.[57]
- Until 2010 the basket of health services will be financed in accordance with the agreement between the Ministers of Finance and Health with regard to the changes agreed upon when the 2008 budget was approved by the Knesset. The remaining expenditure and the financing of the health services basket after 2010 will increase in line with the changes in the size and composition of the relevant segments of the population.[58] The quantitative expansion of these services—for all recipients[59]—will be consistent with the increase in labor productivity without any change in total factor productivity. The rate of increase of wages per employed person in health will be similar to that of the average wage, with the exception of

[55] According to law, the expenditure ceiling is calculated on the basis of the budget of the preceding year, not on that of actual expenditure.

[56] The rate of increase of public consumption prices in the last thirty years outstripped that of GDP prices by an annual average of 1.5 percent (the result is identical for the last twenty years).

[57] Changing the assumption regarding the exchange rate to NIS 4 to the dollar at the end of 2009 reduces the debt/GDP ratio at the end of 2009 by 0.8 percent.

[58] According to: CBS (2008) Forecast of Population in Israel to 2030.

[59] For primary school pupils, for example. This assumption is an illustration intended to also express the increase in the number of recipients of the service due to changes in legislation, such as the Compulsory Education Law for pre-school-age children.

physicians' wages, which will rise in accordance with the results of the arbitration agreed upon in 2008.[60]

- The real wage in the education system will not increase beyond the current agreements between the government and the teachers' unions under existing legislation. The quantitative extent of the education services will be widened in accordance with the growth of the relevant segments of the population and labor productivity, and the relative price of the services will rise at an annual rate of 1.3 percent.[61] The Compulsory Education Law will be applied up to the twelfth grade and the government will reduce the number of pupils in each class, in line with existing agreements and legislation. The wages of university lecturers will rise in accordance with the wage agreement reached with them.
- The implementation of various private bills, which has been postponed in the past and should be put into practice in the next few years, will be deferred yet again.
- Tax revenues , adjusted for legislative changes, will shift in 2009 in line with the Research Department's detailed tax model. In 2010–12, when it is predicted that economic activity will pick up, wage elasticity will be greater than the long-term average, according to the coefficients of the model. In and after 2013 income elasticity relative to GDP growth will be 1.08, similar to its rise in the last 17 years.
- The reform of tax rates and the other tax reductions decided upon by the government, including lowering the payments made by employers and self-employed persons to the National Insurance Institute, will go forward as planned.
- There will be no further privatizations in the coming years.[62]
- After 2013 expenditure will rise in various budget items, in accordance with the long-term paths estimated for them, with the exception of the defense budget, which will increase along the trajectory determined by the Brodet Commission.

c. The basic scenario: gradual recovery of economic activity as of 2010

According to the basic scenario, if the government increases its expenditure in real terms in the next few years in line with the annual 1.7 percent ceiling determined by law, in 2011 the fiscal aggregates will converge to their 2008 level, after a temporary decline.

As stated above, this scenario assumes that after GDP contracts by 1.5 percent in 2009, economic activity will gradually revive, starting in 2010. In this case, provided the government increases its expenditure in real terms in the next few years in accordance with the upper limit determined by law—1.7 percent a year—in 2012 the fiscal aggregates will converge to a level similar to that of 2008, after declining temporarily. Government expenditure as a share of GDP will rise in 2009 and 2010, but will contract once more, alongside the economic recovery; in 2012 it is expected

[60] The decision of the arbitrator, which both sides accepted, was that physicians' wages should be increased by 24 percent in the general government sector and the 'General Health Services,' with the increment to be paid gradually until 2010.

[61] This assumption is consistent with the rate at which expenditure per pupil in elementary and secondary education increased in 1976–2006.

[62] This is a working assumption. The government is planning several additional privatization initiatives whose implementation will reduce the public-sector debt while lowering the flow of revenues from dividends and royalties.

to be 34.1 percent of GDP, 1.5 percentage points less than in 2008. The decline in the public expenditure/GDP ratio will make it possible to reduce the deficit to 1.9 percent of GDP despite the lowering of the tax rates in 2009 and 2010, which will bring Israel's tax burden down to a lower level than that of most of the developed countries. According to this scenario, while the deficit increases in 2009 and 2010 to 5 percent of GDP, the restriction of expenditure will reduce it once again as economic growth revives. In 2012 the public-sector debt/GDP ratio will return to its 2008 level, stabilizing on a downward path (Figure 6.8). Given these conditions, the debt/GDP ratio is expected to reach 60 percent (the ceiling adopted by the members of the EU) in 2018.

Table 6.11
Expected Path of Principal Budget Aggregates, According to Various Scenarios, 2007-12

(percent of GDP)

		Budget	Forecast			
	2007	2008	2009	2010	2011	2012
(1) Fixed increase in expenditure ceiling of 1.7 percent a year[a]						
Expenditure excl. credit	34.9	34.6	35.9	35.9	35.2	34.1
Extent of additional cuts needed to stay below the expenditure ceiling	...	...	...	1.3	0.7	0.9
Real change in civilian expenditure excluding credit	*1.5*	*0.7*	*5.6*	*2.6*	*0.5*	*0.3*
Deficit excl. credit	0.0	-2.1	-5.2	-5.0	-3.3	-1.9
Gross public debt	79.6	78.0	84.9	86.3	85.7	82.7
(2) Increase in expenditure in accordance with specific government decisions[a]						
Expenditure excl. credit	34.9	34.6	35.9	37.3	37.3	37.1
Real change in expenditure	*1.1*	*0.6*	*2.2*	*6.2*	*4.0*	*4.6*
of which Net primary civilian expenditure	1.5	0.7	5.6	9.1	3.9	4.5
Deficit excl. credit	0.0	-2.1	-5.2	-6.3	-5.4	-4.9
Gross public debt	79.6	78.0	84.9	87.6	89.2	89.0
(3) Fixed increase in expenditure of 1.7 percent a year, assuming the crisis continues						
Expenditure excl. credit	34.9	34.6	35.9	36.7	36.5	35.4
Deficit excl. credit	0.0	-2.1	-5.2	-6.1	-5.3	-3.8
Gross public debt	79.6	78.0	84.9	89.3	92.1	90.7
(4) Increase in expenditure in accordance with specific government decisions, assuming the crisis continues						
Expenditure excl. credit	34.9	34.6	35.9	37.9	38.4	38.3
Deficit excl. credit	0.0	-2.1	-5.2	-7.3	-7.2	-6.7
Gross public debt	79.6	78.0	84.9	90.6	95.2	96.7

[a] Assuming that expenditure in 2009 will be in accordance with the government's budget proposal, and that the cuts required in 2010–14 will be made in civilian expenditure.

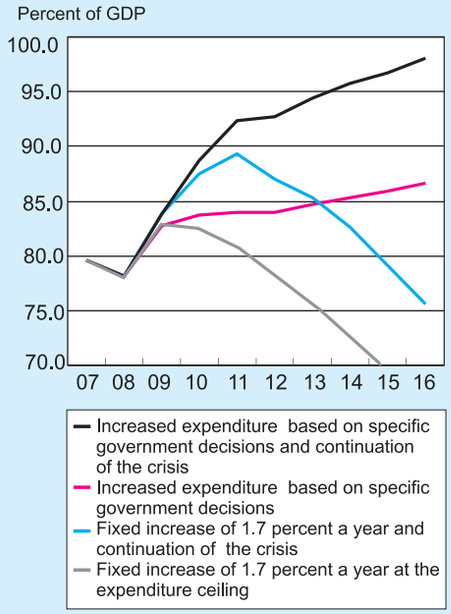
SOURCE: Bank of Israel.

Adhering to the expenditure ceiling will be expressed in the low growth rate of civilian public primary expenditure in 2010–12, which might be too low to meet the demand for public expenditure and hence may not be feasible.

The realization of this scenario requires a concerted fiscal effort, expressed in the low growth rate of civilian public primary expenditure in 2010–12: only 0.8 percent on average.[63] This low rate reflects an increase in defense expenditure due to the rise in US government aid as well as in interest payments due to the expansion of the deficit and the debt. A growth rate of this kind could be too low to meet the demand for public expenditure, so that it is not clear whether it is feasible. Moreover, adhering to the expenditure ceiling requires significant budgetary adjustments, as in recent years the government has adopted long-term plans in many spheres, and at considerable budgetary cost. While past experience shows that there is no guarantee that the plans will be implemented, note that beyond these plans the government (or governments) which will be in office until 2012 will doubtless want to adopt additional plans. According to the assessment derived from the long-term budget path—which also reflects the government's decisions about cuts and freezes of various kinds in the next few years and the expected effect of population growth and macroeconomic developments—the extent of the additional measures required in order to meet this target in 2010 would seem to be considerable: about NIS 9 billion. Adhering to the expenditure ceiling in 2011 and 2012 will require the further contraction of expenditure by NIS 6–7 billion each year (Table 6.11).

Adherence to the expenditure ceiling will require significant budgetary adjustments, as in recent years the government has adopted long-term plans in many areas which require substantial budgets.

Figure 6.8
Debt/GDP Ratio in Various Scenarios, 2007-16



SOURCE: Bank of Israel.

If the government implements its long-term plans without reducing other expenditure, the debt/GDP ratio will rise to 90 percent in 2012 and will continue to grow in the subsequent years, exposing the government to considerable financial risks.

In the alternative scenario—in which the government increases expenditure to implement its long-term plans without reducing other expenses (other than those cuts already decided on)—public expenditure in 2012 will be 2.5 percent of GDP higher than in 2008, and the deficit will stabilize at 5 percent of GDP, above even its average in the 1990s. The debt/GDP ratio will rise to 90 percent in 2012, and will not decline in the subsequent years. Although this path does not represent the immediate deterioration of economic stability, it exposes the government to notable financial risks, especially if economic or security developments are worse than expected. However, a policy path of this kind makes it possible to considerably expand the public services and transfer payments in accordance with the government's targets.

[63] Assuming that all the required cuts for meeting the target are made in civilian expenditure.

d. An alternative scenario: economic revival only in 2011

This scenario examines the implications of the two policy paths examined above if the economic slowdown persists longer. The assumption is that GDP contracts by 1.5 percent in 2009, that there is stagnation in 2010, and that recovery begins gradually with GDP growth of 2.3 percent in 2011. A further assumption is that GDP expands by 5 percent in 2012, and continues to grow at a rapid pace in 2013–15. In this case, even if the expenditure ceiling is met, the deficit in 2012 will be 3.8 percent of GDP, 1.7 percent of GDP higher than its level in 2008. The debt/GDP ratio will rise to 92 percent of GDP and will begin to decline only in 2012. However, despite the sharp cyclical increase, this ratio will decline once again to less than 80 percent in 2017, and will continue falling rapidly. By contrast, in the scenario which assumes that the expenditure ceiling is adjusted to suit the government's long-term plans, the deficit will grow to more than 7 percent of GDP in 2010, remaining at 6.7 percent in 2012. In this case the debt/GDP ratio will rise to more than 95 percent in 2011 and 2012, and will continue increasing in the subsequent years. Note that in this scenario we do not examine the effect of the increase in the deficit and the debt on interest rates, which is expected to exacerbate the negative dynamic of the budget.[64]

e. Conclusion

The above analysis examines the expected development of the fiscal aggregates given the economic slowdown expected in 2009. If the crisis is temporary, adhering to the current expenditure ceiling while cancelling the deficit ceiling, so that the automatic stabilizers are able to operate, increases the risk to the economy only to a moderate extent, enabling it to return to a declining debt path as soon as the crisis is over. If, however, the crisis is worse than expected, and the government elects to implement its long-term plans without offsetting at least some of their influence by reducing other expenditures or raising taxes, the debt/GDP ratio will rise markedly, exposing the economy to genuine risks.

These findings have implications for the policy possibilities confronting the government in the present crisis. Because the existing discrepancy between its long-term plans and the expenditure ceiling could undermine the credibility of the latter, the effectiveness of the fiscal policy measures employed in an effort to accelerate economic activity in the short term could be impaired. Closing this gap by deciding on a fiscal rule which will determine the government's long-term expenditure plan, while adopting specific measures which will be consistent with attaining it, will enhance the credibility of the policy. Increased credibility can be bolstered in the framework of a long-term budget which will require the presentation of budgetary sources for new plans which the government adopts. According to the above findings, a long-term path which is similar to the existing expenditure ceiling can make it possible to

The existing discrepancy between long-term plans and the expenditure ceiling could undermine the credibility of the latter and impair the effectiveness of fiscal policy measures intended to stimulate economic activity.

[64] Based on H. Ber, A. Brender, and S. Ribon (2003), see note 6 in Box 6.1. A one percentage-point increase in the cyclically-adjusted deficit raises the interest rate in the long run by 0.4 percentage points.

Closing the gap by determining the government's long-term expenditure path and adopting specific measures as necessary consistent with its attainment will enhance both the credibility of policy and the ability to stimulate economic activity.

undertake one-off expenditure in the amount of several billion NIS in 2009 in order to stimulate economic activity without endangering stability, even if the downturn becomes worse. Consequently, there is a greater likelihood that expenditure of this kind will be effective in stimulating economic activity. However, a path that is closer to the level of expenditure that is derived from the government's long-term plans could imperil stability even without adding one-off expenditure. Moreover, in view of the implications of adopting a policy this kind for the path of the deficit and the debt, and against the backdrop of the findings in Box 6.1 above, it is unreasonable to assume that it will be able to contribute to the expansion of economic activity, and thereby to moderate the rise in the deficit and the debt/GDP ratio.